TOSHIBA
Satellite A110/
Satellite Pro A110 Series
User's Manual

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TOSHIBA Satellite A110/Satellite Pro A110 *Series Portable Personal Computer User's Manual*

First edition May 2006

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Disclaimer

This manual has been validated and reviewed for accuracy. The instructions and descriptions it contains are accurate for the Satellite A110/Satellite Pro A110 series Portable Personal Computers at the time of this manual's production. However, succeeding computers and manuals are subject to change without notice. TOSHIBA assumes no liability for damages incurred directly or indirectly from errors, omissions or discrepancies between the computer and the manual.

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FCC information

Model Name: Satellite A110/Satellite Pro A110

FCC notice "Declaration of Conformity Information"

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Only peripherals complying with the FCC class B limits may be attached to this equipment. Operation with non-compliant peripherals or peripherals not recommended by TOSHIBA is likely to result in interference to radio and TV reception. Shielded cables must be used between the external devices and the computer's or expansion unit's external monitor port, parallel port, USB port and microphone jack. Changes or modifications made to this equipment, not expressly approved by TOSHIBA or parties authorized by TOSHIBA could void the user's authority to operate the equipment.

EMC Regulatory Information

Contact

Address:	TOSHIBA America Information Systems, Inc. 9740 Irvine Boulevard Irvine, California 92618-1697
Telephone:	(949) 583-3000

EU Declaration of Conformity

CE

TOSHIBA declares, that the product: Satellite A110/Satellite Pro A110 conforms to the following Standards:

This product is labelled with the CE Mark in accordance with the related European Directives, notably Electromagnetic Compatibility Directive 89/336/EEC for the notebook and the electronic accessories including the supplied power adapter, the Radio Equipment and Telecommunications Terminal Equipment Directive 99/5/EEC in case of implemented telecommunication accessories and the Low Voltage Directive 73/23/EEC for the supplied power adapter.

CE Marking is the responsibility of TOSHIBA EUROPE GmbH, Hammfelddamm 8, 41460 Neuss, Germany, phone +49-(0)-2131-158-01.

For a copy of the related CE Declaration of Conformity please refer to the following website: http://epps.toshiba-teg.com.

Optical Disc Drive Safety Instruction

■ Be sure to check the international precautions at the end of this section.

The optical drive that is used in this computer is equipped with a laser device. A classification label with the following sentence is affixed to the surface of the drive.

CLASS 1 LASER PRODUCT
LASER KLASSE 1
LUOKAN 1 LASERLAITE
APPAREIL A LASER DE CLASSE 1
KLASS 1 LASER APPARAT

The drive with the above label is certified by the manufacturer that the drive complies with the requirement for laser product on the date of manufacturing pursuant to article 21 of Code of Federal Regulations by the United States of America, Department of Health & Human Services, Food and Drug Administration.

In other countries, the drive is certified to comply with the requirement pursant to IEC 825 and EN60825 on class 1 laser product.

This computer is equipped with one of the optical drive in the following list according to the model.

Manufacturer	Type
Toshiba Samsung Storage Technology	CD-RW/DVD-ROM TS-L462C
Panasonic Communications Co., LTD.	CD-RW/DVD-ROM UJDA 770
TEAC Corporation	CD-RW/DVD-ROM DW-224E
Pioneer Corporation	DVD-Super Multi DVR-K16
NEC Corporation	DVD-Super Multi ND-7550A
Hitachi LG Data Storage, Inc.	DVD-Super Multi GMA-4082N
Panasonic Communications Co., LTD.	DVD-Super Multi UJ-850B

Modem warning notice

Conformity Statement

The equipment has been approved to [Commission Decision "CTR21"] for pan- European single terminal connection to the Public Switched Telephone Network (PSTN).

However, due to differences between the individual PSTNs provided in different countries/regions the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN network termination point.

In the event of problems, you should contact your equipment supplier in the first instance.

Network Compatibility Statement

This product is designed to work with, and is compatible with the following networks. It has been tested to and found to confirm with the additional requirements conditional in EG 201 121.

Germany	ATAAB AN005, AN006, AN007, AN009, AN010 and DE03, 04, 05, 08, 09, 12, 14, 17
Greece	ATAAB AN005, AN006 and GR01, 02, 03, 04
Portugal	ATAAB AN001, 005, 006, 007, 011 and P03, 04, 08, 10
Spain	ATAAB AN005, 007, 012, and ES01
Switzerland	ATAAB AN002
Norway	ATAAB AN002, 005, 007 and NO 01, 02
All other countries/ regions	ATAAB AN003, 004

Specific switch settings or software setup are required for each network, please refer to the relevant sections of the user guide for more details.

The hookflash (timed break register recall) function is subject to separate national type approvals. It has not been tested for conformity to national type regulations, and no guarantee of successful operation of that specific function on specific national networks can be given.

Japan regulations

Region selection

If you are using the computer in Japan, technical regulations described in the Telecommunications Business Law require that you select the Japan country mode.

It is illegal to use the modem in Japan with any other selection.

Redial

Up to two redial attempts can be made. If more than two redial attempts are made, the modem will return Black Listed. If you are experiencing problems with the Black Listed code, set the interval between redials at one minute or longer.

Japan's Telecommunications Business Law permits up to two redials on analogue telephones, but the redials must be made within a total of three minutes.

The internal modem is approved by Japan Approvals Institute for Telecommunications Equipment.

A04-0609001
or
A05-0413001

Pursuant to FCC CFR 47, Part 68:

When you are ready to install or use the modem, call your local telephone company and give them the following information:

- The telephone number of the line to which you will connect the modem
- The registration number that is located on the device

US: AGSMD01BATHENS or AGSMD01BDELPHI

The FCC registration number of the modem will be found on either the device which is to be installed, or, if already installed, on the bottom of the computer outside of the main system label.

- The Ringer Equivalence Number (REN) of the modem, which can vary. For the REN of your modem, refer to your computer's user's guide.

The modem connects to the telephone line by means of a standard jack called the USOC RJ11C.

Type of service

Your modem is designed to be used on standard-device telephone lines. Connection to telephone company-provided coin service (central office implemented systems) is prohibited. Connection to party lines service is subject to state tariffs. If you have any questions about your telephone line, such as how many pieces of equipment you can connect to it, the telephone company will provide this information upon request.

Telephone company procedures

The goal of the telephone company is to provide you with the best service it can. In order to do this, it may occasionally be necessary for them to make changes in their equipment, operations, or procedures. If these changes might affect your service or the operation of your equipment, the telephone company will give you notice in writing to allow you to make any changes necessary to maintain uninterrupted service.

If problems arise

If any of your telephone equipment is not operating properly, you should immediately remove it from your telephone line, as it may cause harm to the telephone network. If the telephone company notes a problem, they may temporarily discontinue service. When practical, they will notify you in advance of this disconnection.

If advance notice is not feasible, you will be notified as soon as possible. When you are notified, you will be given the opportunity to correct the problem and informed of your right to file a complaint with the FCC. In the event repairs are ever needed on your modem, they should be performed by TOSHIBA Corporation or an authorized representative of TOSHIBA Corporation.

Disconnection

If you should ever decide to permanently disconnect your modem from its present line, please call the telephone company and let them know of this change.

Fax branding

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device to send any message via a telephone fax machine unless such message clearly contains in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business, other entity or individual sending the message and the telephone number of the sending machine or such business, other entity or individual. In order to program this information into your fax modem, you should complete the setup of your fax software before sending messages.

Instructions for IC CS-03 certified equipment

1. NOTICE: The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The Department does not guarantee the equipment will operate to the user's satisfaction.

   Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection.

   The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations. Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

   Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

2. The user manual of analog equipment must contain the equipment's Ringer Equivalence Number (REN) and an explanation notice similar to the following: The Ringer Equivalence Number (REN) of the modem, which can vary. For the REN of your modem, refer to your computer's user's guide.

The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5.

3. The standard connecting arrangement (telephone jack type) for this equipment is jack type(s): USOC RJ11C.

   The IC registration number of the modem is shown below.

   Canada: 4005B-ATHENS or 4005B-DELPHI

Notes for Users in Australia and New Zealand

Modem warning notice for Australia

Modems connected to the Australian telecoms network must have a valid Austel permit. This modem has been specifically configured to ensure compliance with Austel standards when the country/region selection is set to Australia.

The use of other country/region setting while the modem is attached to the Australian PSTN would result in your modem being operated in a non-compliant manner. To verify that the country/region is correctly set, enter the command ATI which displays the currently active setting.

To set the country/region permanently to Australia, enter the following command sequence:

- AT%TE=1
- ATS133=1
- AT&F
- AT&W
- AT%TE=0
- ATZ

Failure to set the modem to the Australia country/region setting as shown above will result in the modem being operated in a non-compliant manner. Consequently, there would be no permit in force for this equipment and the Telecoms Act 1991 prescribes a penalty of $12,000 for the connection of non-permitted equipment.

Notes for use of this device in New Zealand

- The grant of a Telepermit for a device in no way indicates Telecom acceptance of responsibility for the correct operation of that device under all operating conditions. In particular the higher speeds at which this modem is capable of operating depend on a specific network implementation which is only one of many ways of delivering high quality voice telephony to customers. Failure to operate should not be reported as a fault to Telecom.
- In addition to satisfactory line conditions a modem can only work properly if:

  a/ it is compatible with the modem at the other end of the call and

  b/ the application using the modem is compatible with the application at the other end of the call - e.g., accessing the Internet requires suitable software in addition to a modem.
- This equipment shall not be used in any manner which could constitute a nuisance to other Telecom customers.
- Some parameters required for compliance with Telecom's PTC Specifications are dependent on the equipment (PC) associated with this modem. The associated equipment shall be set to operate within the following limits for compliance with Telecom Specifications:

  a/ There shall be no more than 10 call attempts to the same number within any 30 minute period for any single manual call initiation, and

  b/ The equipment shall go on-hook for a period of not less than 30 seconds between the end of one attempt and the beginning of the next.

  c/ Automatic calls to different numbers shall be not less than 5 seconds apart.
- Immediately disconnect this equipment should it become physically damaged, and arrange for its disposal or repair.
- The correct settings for use with this modem in New Zealand are as follows:

  ATB0 (CCITT operation)

  AT&G2 (1800 Hz guard tone)

  AT&P1 (Decadic dialling make-break ratio =33%/67%

  ATS0=0 (not auto answer)

  ATS10=less than 150 (loss of carrier to hangup delay, factory default of 15 recommended)

  ATS11=90 (DTMF dealing on/off duration=90 ms)

  ATX2 (Dial tone detect, but not (U.S.A.) call progress detect)
- When used in the Auto Answer mode, the S0 register must be set with a value of 3 or 4. This ensures:

  (a) a person calling your modem will hear a short burst of ringing before the modem answers. This confirms that the call has been successfully switched through the network.

  (b) caller identification information (which occurs between the first and second ring cadences) is not destroyed.

- The preferred method of dialling is to use DTMF tones (ATDT...) as this is faster and more reliable than pulse (decadic) dialling. If for some reason you must use decadic dealing, your communications program must be set up to record numbers using the following translation table as this modem does not implement the New Zealand "Reverse Dialling" standard.

  Number to be dialled: 0 1 2 3 4 5 6 7 8 9

  Number to program into computer: 0 9 8 7 6 5 4 3 2 1

  Note that where DTMF dealing is used, the numbers should be entered normally.
- The transmit level from this device is set at a fixed level and because of this there may be circumstances where the performance is less than optimal. Before reporting such occurrences as faults, please check the line with a standard Telepermitted telephone, and only report a fault if the phone performance is impaired.
- It is recommended that this equipment be disconnected from the Telecom line during electrical storms.
- When relocating the equipment, always disconnect the Telecom line connection before the power connection, and reconnect the power first.
- This equipment may not be compatible with Telecom Distinctive Alert cadences and services such as FaxAbility.

  (NOTE THAT FAULT CALL OUT CAUSED BY ANY OF THE ABOVE CAUSES MAY INCUR A CHARGE FROM TELECOM)

General conditions

As required by PTC 100, please ensure that this office is advised of any changes to the specifications of these products which might affect compliance with the relevant PTC Specifications.

The grant of this Telepermit is specific to the above products with the marketing description as stated on the Telepermit label artwork. The Telepermit may not be assigned to other parties or other products without Telecom approval.

A Telepermit artwork for each device is included from which you may prepare any number of Telepermit labels subject to the general instructions on format, size and colour on the attached sheet.

The Telepermit label must be displayed on the product at all times as proof to purchasers and service personnel that the product is able to be legitimately connected to the Telecom network.

The Telepermit label may also be shown on the packaging of the product and in the sales literature, as required in PTC 100.

The charge for a Telepermit assessment is $337.50. An additional charge of $337.50 is payable where an assessment is based on reports against non-Telecom New Zealand Specifications. $112.50 is charged for each variation when submitted at the same time as the original.

An invoice for $NZ1237.50 will be sent under separate cover.

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Please take notice that unauthorized copying, modification, assignment, transmission and disposition may be subject to claims for damages and penalties.

General Precautions

TOSHIBA computers are designed to optimize safety, minimize strain and withstand the rigours of portability. However, certain precautions should be observed to further reduce the risk of personal injury or damage to the computer.

Be certain to read the general precautions below and to note the cautions included in the text of the manual.

Stress injury

Carefully read the *Safety Instruction Manual*. It contains information on prevention of stress injuries to your hands and wrists that can be caused by extensive keyboard use.

Heat injury

- Avoid prolonged physical contact with the bottom of the computer. If the computer is used for long periods, its surface can become very warm. While the temperature will not feel hot to the touch, if you maintain physical contact with the computer for a long time (if you rest the computer on your lap, for example) your skin might suffer low-heat injury.
- If the computer has been used for a long time, avoid direct contact with the metal plate supporting the I/O ports. It can become hot.
- The surface of the AC adapter can become hot when in use. This condition does not indicate a malfunction. If you need to transport the AC adapter, disconnect it and let it cool before moving it.
- Do not lay the AC adapter on a material that is sensitive to heat. The material could be damaged.

Pressure or impact damage

Do not apply heavy pressure to the computer or subject it to strong impact.

Excessive pressure or impact can damage computer components or otherwise cause malfunctions.

PC Card overheating

Some PC Cards can become hot with prolonged use. Overheating of a PC Card can result in errors or instability in the PC Card operation. Also be careful when you remove a PC Card that has been used for a long time.

Mobile phone

Use of mobile phones can interfere with the audio system. Computer operation is not impaired but it is recommended that a distance of 30cm be maintained between the computer and a mobile phone in use.

LCD

Over a period of time, and depending on the usage of the computer, the brightness of the LCD screen will deteriorate. This is an intrinsic characteristic of LCD technology. Maximum brightness is only available when operating in AC power mode. The screen will dim when the computer is operated on battery power and you may not be able to increase the brightness of the screen.

CE compliance

This product and the supplied accessories are designed to observe the related EMC (Electromagnetic Compatibility) and safety standards. However, TOSHIBA cannot guarantee that this product still observes these EMC standards if accessories or cables not manufactured / distributed by TOSHIBA are connected or implemented. To avoid in general EMC problems, the following advice should be observed:

- Only CE marked accessories should be connected / implemented
- Only best shielded cables should be connected

Working environment

This product was designed to fulfil the EMC (Electromagnetic Compatibility) requirements for "residential, commercial and light industry environments".

The following environment is not approved:

- Industrial Environments (e.g. environments where a with a mains voltage of 380V three-phase is being used).

In the following environments the use of this product can be restricted:

- Medical Environments: This product is not certified as a medical product according to the Medical Product Directive 93/42/EEC, but can be used in office areas where the use is not restricted. Please disable the wireless LAN or Bluetooth hardware in such areas as long this feature is not official supported by the operator of the related medical facility.
- Vehicle Environments: Please read operator's manual of the vehicle manufacturer for further restrictions of use.
- Aircraft Environments: Please following the advice of the flight personnel regarding restrictions of use.

Any consequences resulting from the use of this product in working environments that are not approved or the use is restricted are not the responsibility of Toshiba Corporation. The consequences of the use of this product in those working environments may be:

- Interference with other devices or machines in the nearby surrounding area
- Malfunction of, or data loss from, this product caused by disturbances generated by other devices or machines in the nearby surrounding area

Furthermore, for general safety reasons, the use of this product in environments with explosive atmospheres is not permitted.

Network connection (Class A warning)

If this product has networking capabilities and will be connected to a network, Class A radiation limits will be observed (in accordance with technical conventions). This means that if the product will be used in a domestic environment, other devices in the near surrounding area may suffer interference. Consequently, please do not use this product in such environments (for example a living room), otherwise you could be held responsible for any ensuing interference.

Information on the secure writing to optical disc media

Even if your software gives no indication that any problems have occurred, you should always check to ensure that information has been successfully stored on recordable optical media (CD-R, CD-RW and so forth).

Wireless LAN and your Health

Wireless LAN products, like other radio devices, emit radio frequency electromagnetic energy. The level of energy emitted by Wireless LAN devices however is far less than the electromagnetic energy emitted by other wireless devices such as mobile phones.

Because Wireless LAN products operate within the guidelines found in radio frequency safety standards and recommendations, TOSHIBA believes Wireless LAN is safe for use by consumers. These standards and recommendations reflect the consensus of the scientific community and result from deliberations of panels and committees of scientists who continually review and interpret the extensive research literature.

In some situations or environments, the use of Wireless LAN may be restricted by the proprietor of the building or responsible representatives of the organisation. These situations may for example include:

- Using the Wireless LAN equipment on board of aeroplanes
- In any other environment where the risk of interference to other devices or services is perceived or identified as harmful.

If you are uncertain of the policy that applies on the use of wireless devices in a specific organisation or environment (e.g. airports), you are encouraged to ask for authorisation to use the Wireless LAN device prior to turning on the equipment.

Safety Instruction for Wireless Products

If your computer has a wireless function, all safety instructions must be read carefully and must be fully understood, before you attempt to use it. This manual contains the safety instructions that must be observed in order to avoid potential hazards that could result in personal injuries or could damage your wireless products.

Notes for Users in Taiwan

根據交通部低功率電波輻射性電機管理辦法第十二條及第十四條規定：
經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。
低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

Limitation of Liability

For damage occurring due to an earthquake or thunder, fire beyond our responsibility, action by third party, other accident, intentional or accidental mistakes by a user, misuse or use under abnormal conditions, we do not take any responsibility.

For incidental damage (loss of business profit, business interruption, etc.) occurring due to use or disability of the product, we do not take any responsibility.

For damage occurring due to non observance of the contents described in the instruction manual, we do not take any responsibility.

For damage occurring due to erroneous operation or hang up caused by use in combination with products not related to our company, we do not take any responsibility.

Usage Restrictions

Do not use the Wireless Products for controlling the following equipment:

- Equipment directly linked with human life corresponding to the following.
  - Medical equipment such as life support systems, equipment used in operations, etc.
  - Exhaust systems for gases such as poisonous gas etc. and exhaust systems for smoke.
  - Equipment that must be set up in compliance with various laws such as the Fire Services Act, the Construction Standard Act, etc.
  - Equipment corresponding to that mentioned above.

- Equipment linked with human safety or having a serious influence on the safe maintenance of public function, etc., because it is not designed or manufactured for this type of use.
  - Traffic control equipment for air, railroad, road, marine transport, etc.
  - Equipment used in atomic power plants etc.
  - Equipment corresponding to that mentioned above.

Warning

Turn OFF the Wireless Communication switch of wireless products in a congested place, such as a crowded commuter train.

Keep this product away from a cardiac pacemaker at least 22cm.

Radio waves can potentially affect cardiac pacemaker operation, thereby causing respiratory troubles.

Turn OFF the Wireless communication switch inside a medical facility or near medical electric equipment. Do not bring medical electric equipment close to the product.

Radio waves can potentially affect medical electric equipment, thereby causing an accident due to malfunction.

Turn OFF the Wireless communication switch near an automatic door, fire alarm or other automatic control equipment.

Radio waves can potentially affect automatic control equipment, thereby causing an accident due to malfunction.

Do not turn ON the Wireless communication switch in aircraft or in places that generate or can generate radio interference.

Radio waves can potentially affect equipment, such as that used on-board aircraft, causing an accident due to malfunction.

You should monitor possible radio interference or other issues that may arise with other equipment while the product is used. If any effect is noted, turn OFF the Wireless communication switch.

Otherwise, radio waves can potentially affect other equipment, thereby causing an accident due to malfunction.

When using the product in a car, check with the automobile dealer if the car has an adequate electromagnetic compatibility (EMC).

Radio waves of the product can potentially hamper safe driving.

Depending on car model, the product can rarely affect car electronic equipment if it is used in a car.

Note

Do not use this product in the following places:

Near a microwave oven or other environment which generates a magnetic field.

Near any place or equipment that generates static electricity or radio interference.

Depending on the environment, in a place where radio waves cannot reach the product.

Manual contents

This manual offers important information about your computer, including solutions to the most common problems, and fetures and specifications. Refer to the Online manual, preinstalled on you system for the details.

Chapter 1, *Satellite A110/Satellite Pro A110 Features*, is an overview of the computer's special features, utilities, and options.

Chapter 2, *The Grand Tour*, identifies the components of the computer and briefly explains how they function.

Chapter 3, *Getting Started*, provides a quick overview of how to begin operating your computer and gives tips on safety and designing your work area. Be sure to read the sections on setting up the operating system and on restoring the pre-installed software.

Chapter 4, *Operating Basics*, includes instructions on using the following devices: TouchPad, the optical disc drives, the internal modem, LAN and wireless LAN. It also provides tips on care of the computer, disks and DVD/CD-ROMs.

Chapter 5, *The Keyboard*, describes special keyboard functions including the keypad overlay and hotkeys.

Chapter 6, *Power and Power-Up Modes*, gives details on the computer's power resources.

Chapter 7, *HW Setup*, introduces you to the TOSHIBA Hardware Setup program.

Chapter 8, *Optional Devices*, describes the optional hardware available.

Chapter 9, *Troubleshooting*, provides helpful information on how to perform some diagnostic tests, and suggests courses of action if the computer doesn't seem to be working properly.

Chapter 10, *Disclaimers*, provides disclaimer information related to your computer.

The Appendices provide technical information about your computer.

The Glossary defines general computer terminology and includes a list of acronyms used in the text.

Equipment checklist

Carefully unpack your computer. Save the box and packing materials for future use. Check to make sure you have all the following items:

Hardware

- Satellite A110/Satellite Pro A110 Series Portable Personal Computer
- Universal AC Adapter and Power Cord
- USB Floppy Disk Drive (provided with some models)
- Modular cable for modem (provided with some models)

Software

Microsoft® Windows® XP Home Edition/Professional

- The following software which is pre-installed on your hard disk:
  - Microsoft® Windows® XP Home Edition/Professional
  - TOSHIBA Utilities
  - DVD Video Player
  - TOSHIBA Disc Creator
  - TOSHIBA Direct Disc Writer
  - TOSHIBA Power Saver
  - TOSHIBA ConfigFree
  - TOSHIBA Assist
  - TOSHIBA Controls
  - TOSHIBA PC Diagnostic Tool
  - TOSHIBA Touch and Launch
  - TOSHIBA TouchPad On/Off Utility
  - TOSHIBA Zooming Utility
  - TOSHIBA SD Memory Card Format*
  - TOSHIBA Acoustic Silencer
  - TOSHIBA HW Setup
  - TOSHIBA Fn-esse
  - TOSHIBA Accessibility
  - TOSHIBA Virtual Sound
  - TOSHIBA Hotkey Utility
  - TOSHIBA Supervisor Password Utility
  - Online Manual
- Product Recovery disc (provided with some models)

* The availability of this software is dependent on the model you purchased.

The system may not function properly if you use drivers that are not pre-installed or distributed by TOSHIBA

Documentation

- Your computer's documentation:
  - *Satellite A110/Satellite Pro A110 Series Personal Computer User's Manual*
  - Microsoft® Windows® XP manual package (provided with some models)
  - International Limited Warranty (ILW) Instruction (This instruction is included only with computers sold in ILW supported areas.)

If any of the items are missing or damaged, contact your dealer immediately.

Features

The *Satellite A110/Satellite Pro A110 Series* computer uses TOSHIBA's advanced Large Scale Integration (LSI), Complementary Metal-Oxide Semiconductor (CMOS) technology extensively to provide compact size, minimum weight, low power usage, and high reliability. This computer incorporates the following features and benefits:

Processor

	Depending on the model you purchased: Intel® Core™ Duo Processor Intel® Core™ Solo Processor Intel® Celeron® M

Chipset

	Mobile Intel® 945GM Express Chipset or ATI RADEON® XPRESS 200M ENE CB714 cardbus controller for the model with Multiple Digital Media card slot ENE CB1410 cardbus controller VIA6311S IEEE1394a controller Realtek ALC861 Audio codec Realtek RTL8101E or RTL8100CL for 10/100Mbps LAN controller Realtek RTL8111B for 10M/100M/1Gbps LAN controller

Memory

The graphics system in your computer may use part of the main system memory for graphics performance and therefore reduce the amount of system memory available for other computing activities. The amount of system memory allocated to support graphics may vary depending on the graphics system, applications utilized, system memory size and other factors.

Slot	Two DDRII SO-DIMM, up to 4GB with Intel® 945GM Express Chipset; up to 2GB with ATI RADEON® Xpress 200M Chipset can be upgraded through the memory expansion slot. You need to remove existing SO-DIMM if SO-DIMM is Maximum upgradable system memory size is depending on the system you purchased.
Video RAM	Depending on the model you purchased: Mobile Intel® 945GM Express Chipset, up to 128MB shared with main memory. ATI RADEON® XPRESS 200M up to 64MB shared with main memory (for 256MB main memory), up to 128MB shared with main memory (for 512MB, 756MB main memory), up to 256MB shared with main memory (for more than 1GB main memory).

BIOS

	1MB Flash ROM for system BIOS
	Suspend to memory or hard disk drive
	Various Hotkey functions for system control
	Complete ACPI 1.0b functionality

Power

Battery Pack	4-cell Lithium Ion smart battery pack with 14.4V*2000mAh* 6-cell Lithium Ion smart battery pack with 10.8V*4000mAh 8-cell Lithium Ion smart battery pack with 14.4V*4300mAh Approximately 12 hours or longer charging time to 100% battery capacity with system switched on. Approximately 4 hours charge time to 100% battery capacity with system switched off. Approximately 1.5 days discharging time in Standby Mode for the 8-cell battery, 1 day for the 6-cell battery and 0.75 days for 4-cell battery. Discharge time in shutdown mode is approximately 1 month * The availability of this battery is dependent on the model you purchased.
RTC Battery	The computer has an internal battery to back up its Real Time Clock (RTC), calender and setup information. This battery will last for an average of one month with no external power source.
AC adapter	The universal AC adapter provides power to the system and recharges the batteries when they are low. It comes with a detachable power cord.

Floppy Disk Drive devices

	External USB Floppy Disk Drive (depends on the model purchased)

TouchPad

	A TouchPad and control buttons in the palm rest enable control of the on-screen pointer.

Display

	15.4” TFT screen with a resolution of 1280 horizontal x 800 vertical pixels WXGA

Disks

Fixed hard disk	Depending on the model purchased, one of the following drives will be installed: 40.0 billion bytes (37.26GB) 60.0 billion bytes (55.88GB) 80.0 billion bytes (74.52GB) 100.0 billion bytes (93.16GB) 120.0 billion bytes (111.78GB) 160.0 billion bytes (149.04GB) 9.5mm 2.5" hard disk drive Serial ATA 1.0
CD-RW/DVD-ROM drive	Some models are equipped with a full-size CD-RW/DVD-ROM module that lets you record data to rewritable CD/CD-RWs as well as run either 12cm (4.72") or 8cm (3.15") CD/DVDs without using an adapter. It reads DVD-ROMs at maximum 8x speed and CD-ROMs at maximum 24x speed. It writes CD-Rs at up to 24x speed, CD-RWs at up to 24x speed. This drive supports the following formats: ■ DVD-ROM ■ DVD-Video ■ CD-R ■ CD-RW ■ CD-DA ■ CD-Text ■ Photo CD (single/multi-session) ■ CD-ROM Mode1, Mode2 ■ CD-ROMXA Mode2 (Form1, Form2) ■ Enhanced CD(CD-EXTRA)

DVD Super Multi drive supporting ± R Double Layer	Some models are equipped with a full-size DVD Super Multi drive supporting ±R Double Layer module with dual layer support that lets you record data to rewritable CD/DVDs as well as run either 12cm (4.72") or 8cm (3.15") CD/DVDs without using an adapter. It reads DVD-ROMs at maximum 8x speed and CD-ROMs at maximum 24x speed. It writes CD-Rs at up to 24x speed, CD-RWs at up to 10x speed, DVD-Rs at maximum 8x speed, DVD-RWs at maximum 4x speed, DVD+RWs at maximum 4x speed, DVD+Rs at maximum 8x speed, DVD+R (double layer) at maximum 2.4x speed, DVD-R (dual layer) at maximum 2x speed and DVD-RAM at maximum 5x speed. This drive supports the same formats as the CD-RW/DVD-ROM drive plus the following: ■ DVD-ROM ■ DVD-Video ■ DVD-R ■ DVD-RW ■ DVD+R ■ DVD+RW ■ DVD-RAM ■ DVD+R (double layer) ■ CD-R ■ CD-RW ■ CD-DA ■ CD-Text ■ DVD-R (dual layer) ■ Photo CD (single/multi-session) ■ CD-ROM Mode1, Mode2 ■ CD-ROMXA Mode2 (Form1, Form2) ■ Enhanced CD (CD-EXTRA)

Computers in this series can be configured with multiple types of optical disc drive. For more information on the optical disc drives available, talk to your dealer.

Slots (depending on configuration)

PC Card	Accommodates one type II device.
Multiple Digital Media Card (SD/ MMC/MS/MS Pro/ xD)	This slot lets you easily transfer data from devices, such as digital cameras and Personal Digital Assistants, that use flash-memory. You can use a memory module in this slot.
Express Card	The ExpressCard expansion slot that can accommodate two standard module formats; an ExpressCard/34 module and an ExpressCard/54 module. An ExpressCard module is a small add-in card technology based on the PCI Express and Universal Serial Bus (USB) interfaces.

Ports (depending on configuration)

External monitor	15-pin analog VGA port supports VESA DDC2B compatible functions.
Universal Serial Bus	The computer has three Universal Serial Bus (USB) ports that comply with the USB 2.0 standard, which enables data transfer speeds more than 40 times faster than USB 1.1 (which this computer also supports).
TV Out	The 4-pin S-Video port is compatible with PAL or NTSC TV standard, supporting Macrovision 7.02 copy protection.

Multimedia

Sound system	The integrated Windows® compatible sound system provides support for internal speakers as well as jacks for an external microphone and headphones.
Express Media Player	Lets you use the computer's fixed optical disc drive as a stand-alone audio CD player or video DVD player.
Headphone jack	A standard 3.5mm stereo jack is provided for the connection of external headphones or speakers.
Microphone jack	A standard 3.5 mm mini microphone jack enables connection of monaural microphone input.

Communications (depending on configuration)

Modem	An internal modem provides capability for data and fax communication. It supports the V.90 or V.92 standards depending on the region and provides a modem jack for connection to a telephone line. The speed of data and fax transfer depends on the analog telephone line conditions.
LAN	The computer has built-in support for Ethernet LAN (10 megabits per second, 10BASE-T), Fast Ethernet LAN (100 Mbps 100BASE-TX), or Gigabit Ethernet LAN (1000 Mbps, 1000BASE-T).
Wireless LAN	The computer has a built-in wireless LAN mini-PCI card that is compatible with other LAN systems that support the following: 802.11a+g wireless LAN module/ 802.11g wireless LAN module. It has a Frequency Channel Selection (2.4 or 5 GHz) and allows roaming over multiple channels.

Security

	Power-on password protection Two level password architecture

Security Lock Slot

	Receives an optional security lock in order to anchor the computer to a desk or other large, heavy object.

Special features

The following features are either unique to TOSHIBA computers or are advanced features, which make the computer more convenient to use.

Hotkeys	Key combinations that let you quickly modify the system configuration directly from the keyboard without running a system configuration program.
Display Automatic Power off	This feature automatically cuts off power to the internal display when there is no input from the keyboard or pointing device for a specified time period. Power is restored when any key is pressed or when there is input from a pointing device. You can specify the time period in the TOSHIBA Power Saver utility.
Hard Disk Drive Automatic Power Off	This feature automatically cuts off power to the hard disk drive when it is not accessed for a specified time period. Power is restored when the hard disk is accessed. You can specify the time period in the TOSHIBA Power Saver utility.
System Automatic Standby/Hibernation	This feature automatically places the system into either Standby Mode or Hibernation Mode when there is no input or hardware access for a specified time period. You can specify the time period and select either System Standby or System Hibernate in the TOSHIBA Power Saver utility.
Keypad Overlay	A ten-key pad is integrated into the keyboard.
Power-on Password	Two levels of password security are available, Supervisor and User, which can prevent unauthorized access to your computer.
Battery Save Mode	This feature lets you save battery power. You can specify the level of system power management in the TOSHIBA Power Saver utility.

Instant Security	A Hotkey function which blanks the screen and activates password security to provide quick and easy data security.
Panel Power Off/On	This feature turns power to the computer off when the display panel is closed and turns it back on when the panel is opened. You can specify the setting in the TOSHIBA Power Saver utility.
Low Battery Automatic Hibernation	When battery power is exhausted to the point that computer operation cannot be continued, the system automatically enters Hibernation Mode and shuts itself down. You can specify the setting in the TOSHIBA Power Saver utility.
Hibernation	This feature lets you turn off the power without exiting from your software. The contents of main memory are saved to the hard disk. When you turn on the power again, you can continue working right where you left off.
Standby	In Standby Mode, power to the system remains on, but the processor and all other devices are effectively in 'sleep mode'. When the computer is in Standby Mode, the Power LED flashes amber. The computer enters Standby Mode regardless of the Hibernate Mode setting.

- *Before entering Standby mode, be sure to save your data.*
- *Do not install or remove a memory module while the computer is in Standby mode. The computer or the module could be damaged.*
- *Do not remove the battery pack while the computer is in Standby mode. Data in memory will be lost.*

Utilities

This section describes preinstalled utilities and tells how to start them. For details on operations, refer to each utility's online manual, help files or readme files.

TOSHIBA Power Saver	TOSHIBA Power Saver provides configuration option to conserve power when the computer is running on either battery or mains power. You can start TOSHIBA Power Saver as follows: If Control Panel is in Category View: **Start→Settings→Control Panel→Performance and Maintenance→TOSHIBA Power Saver** If Control Panel is in Classic View: **Start→Control Panel→TOSHIBA Power Saver**
TOSHIBA Assist	TOSHIBA Assist is a graphical user interface that provides easy access to help and services.
TOSHIBA PC Diagnostic Tool	TOSHIBA PC Diagnostic tool displays the basic information on the computer's configuration and allows some of the built-in devices functionality to be tested. You can start the TOSHIBA PC Diagnostic Tool as follows: **Start→All Programs→TOSHIBA→Utilities→PC Diagnostic Tool**
TOSHIBA Controls	This utility allows you to configure the computer's audio/video control buttons and setup the audio/video playback applications. ■ Buttons Assign applications or functions to the Internet button and the CD/DVD button. The default settings are default browser and CD/DVD. ■ Media Apps Allows the selection of the application to be used for audio and video playback.
DVD Video Player	The DVD player is used to play DVD Video media through an on-screen interface and functions. Click Start, point to All Programs, point to InterVideo WinDVD then click InterVideo WinDVD.

TOSHIBA ConfigFree	ConfigFree is a suite of utilities to allow easy control of communication devices and network connections. ConfigFree also allows you to find communication problems and create profiles for easy switching between location and communication networks. To start ConfigFree, click the Start Button, point to All Programs, point to TOSHIBA, point to Networking and click ConfigFree.
TOSHIBA TouchPad On/Off Utility	Pressing Fn+F9 in a Windows® environment enables or disables the TouchPad function. When you press these hot keys, the current setting will change and be displayed as an icon onscreen.
TOSHIBA Disc Creator	You can create discs in several formats including audio CDs that can be played on a standard stereo CD player and data discs to store the files and folders on your hard disk drive. This software can be used on a model with a CD-RW/DVD-ROM drive or a DVD Super Multi drive supporting ±R Double Layer.
TOSHIBA Direct Disc Writer	TOSHIBA Direct Disc Writer is the packet writing software which provides the function to write files and/or folders to DVD+RW, DVD-RW or CD-RW media via a drive letter like a floppy disk or other removable disk media.
TOSHIBA Touch and Launch	TOSHIBA Touch and Launch is a tool that allows you to perform various tasks easily using the TouchPad. It is useful in the following conditions: - To open a file located on the desktop whose icon is obscured by a window. - To open a page contained in the Internet Explorer Favorites menu. - To display the list of currently open windows and change the active window. It also provides the following functions by customizing the settings. - To open a file stored in a predefined folder. - To quickly launch your frequently used applications which have been registered.
TOSHIBA Zooming Utility	This utility allows you to enlarge or reduce the icon size on the desktop or the application window.

TOSHIBA Hardware Setup	This program lets you customize your hardware settings according to the way you work with your computer and the peripherals you use. To access this utility, click Start, click Control Panel, click Printers and Other Hardware and select the TOSHIBA HW Setup icon.
TOSHIBA Fn-esse	This program lets you define your own "shortcut" keys to quickly launch applications and speed your work in Windows. To start the utility, click **Start**, point to **All Programs**, point to **TOSHIBA**, point to **Utilities** and click **Fn-esse**.
TOSHIBA Accessibility	This utility lets you make the **Fn** key sticky, that is, you can press it once, release it, and then press an "**F number**" key. The **Fn** key remains active until another key is pressed.
CD/DVD Drive Acoustic Silencer	This utility allows you to configure the read speed of CD drive. You can either configure Normal Mode, which operates the drive at its maximum speed for quick data access, or Quiet Mode which runs at single speed for CD audio and which can lessen operational noise. It is ineffective in DVD.

Options

You can add a number of options to make your computer even more powerful and convenient to use. The following options are available:

Memory Modules	Two memory module can be installed in this computer.

Use only PC4200 and PC5300 compatible DDRII memory modules. See your TOSHIBA dealer for details*

** The availability of DDRII is dependent on the model you purchased.*

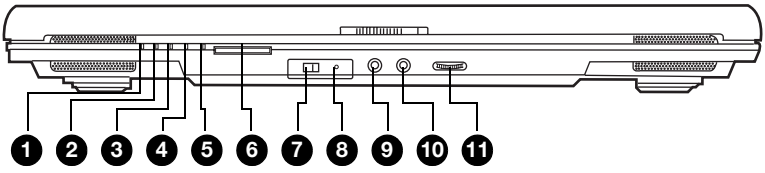
Battery Pack	An additional battery pack can be purchased from your TOSHIBA dealer. Use it as a spare to increase your computer operating time.
AC adapter	If you use your computer at more than one site frequently, it may be convenient to purchase an additional AC adapter for each site so you will not have to carry the adapter with you.
USB Floppy Disk Drive	Lets you attach a floppy disk drive to your computer by means of a USB cable.

Quick tour

This section identifies the various components of your computer. Become familiar with each component before you operate the computer. Refer to the Chapter 2, The Grand Tour, in the Online manual for details.

Certain types of notebook chassis are designed to accommodate all possible configurations for an entire product series. Your selected model may not have all the features and specifications corresponding to all of the icons or switches shown on the notebook chassis, unless you have selected all those features.

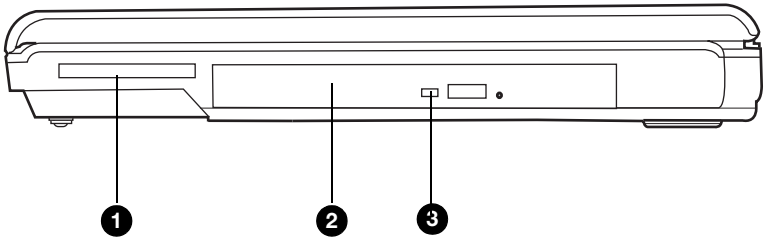
Front with the display closed



1. DC IN LED
2. POWER LED
3. BATTERY LED
4. HARD DISK DRIVE LED
5. MULTIPLE DIGITAL MEDIA CARD SLOT ACCESS LED*
6. MULTIPLE DIGITAL MEDIA CARD SLOT*
7. WIRELESS COMMUNICATION SWITCH*
8. WIRELESS COMMUNICATION LED*
9. MICROPHONE JACK
10. HEADPHONE JACK
11. VOLUME CONTROL

* The availability of this feature is dependent on the model you purchased.

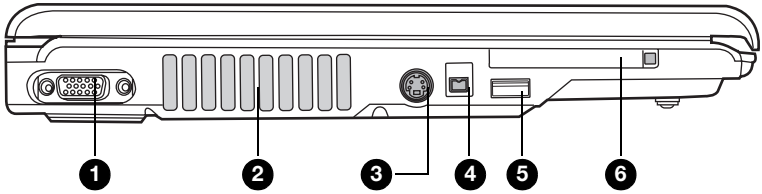
Right side



1. EXPRESS CARD SLOT*
2. OPTICAL DISC DRIVE
3. OPTICAL DISC DRIVE LED

* The availability of this feature is dependent on the model you purchased.

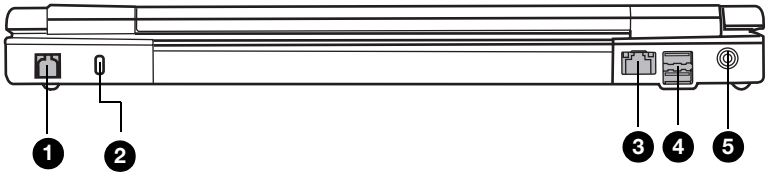
Left side



1. RGB Monitor Port
2. Fan Vents
3. TV Out (S-Video) Port
4. i.LINK (IEEE1394a) Port*
5. Universal Serial Bus (USB) Port
6. PC Card Slot

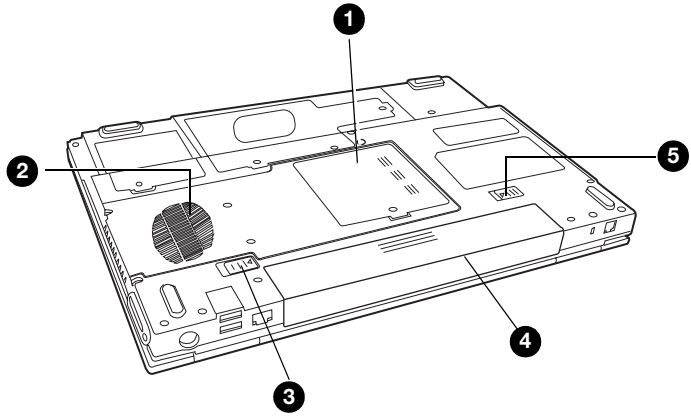
* The availability of this feature is dependent on the model you purchased.

Back side



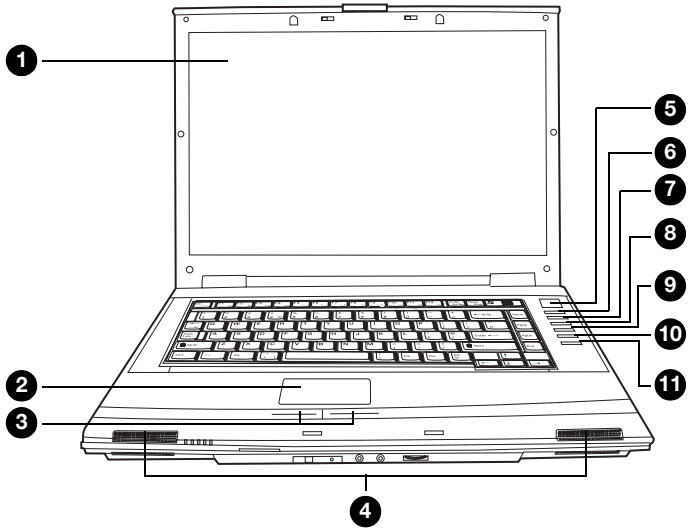
1. Modem Jack
2. Security Lock
3. LAN Jack
4. Universal Serial Bus (USB) Ports
5. DC IN 19V Jack

Underside



1. Expansion Memory Socket
2. Fan Vent
3. Battery Pack Latch
4. Battery Pack
5. Battery Pack Lock

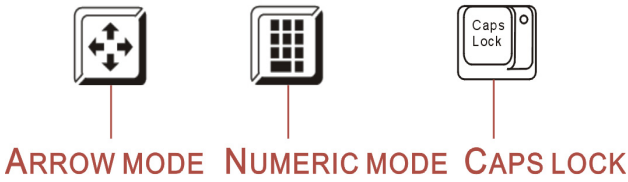
Front with the display open



1. Display Screen
2. TouchPad
3. TouchPad Control Buttons
4. Left and Right Speakers
5. Power Button
6. Internet Button*
7. Media Player Button*
8. Play/Pause Button*
9. Stop/Eject Button*
10. Next Button*
11. Previous Button

* The availability of this feature is dependent on the model you purchased.

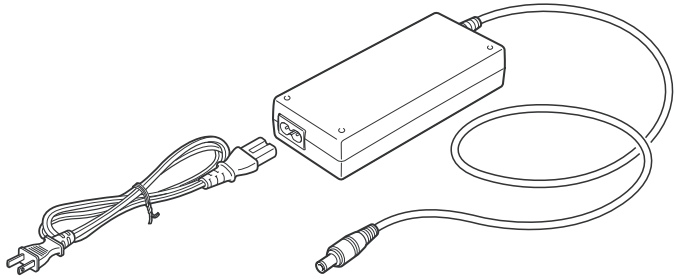
Keyboard Indicators



AC adapter

The AC adapter converts AC power to DC power and reduces the voltage supplied to the computer. It can automatically adjust to any voltage from 100 to 240 volts and to a frequency of either 50 or 60 hertz, enabling you to use the computer in almost any country/region.

To recharge the battery, simply connect the AC adapter to a power source and the computer.



Use of the wrong adapter could damage your computer. TOSHIBA assumes no liability for any damage in such case. The output rating for the computer is 19 volts DC.

Please use only the AC Adapter supplied with the computer or an AC adapter certified by TOSHIBA.

Setting up your work space

Establishing a comfortable work site is important for you and your computer. A poor work environment or stressful work habits can result in discomfort or serious injury from repetitive strain to your hands, wrists or other joints. Proper ambient conditions should also be maintained for the computer's operation. This section discusses the following topics:

- General conditions
- Placement of the computer and peripheral devices
- Seating and posture
- Lighting
- Work habits

General conditions

In general, if you are comfortable, so is your computer, but read the following to make sure your work site provides a proper environment.

- Make sure there is adequate space around the computer for proper ventilation.
- Make sure the AC power cord connects to an outlet that is close to the computer and easily accessible.
- The temperature should be 5 to 35 degrees Centigrade (41 to 95 degrees Fahrenheit) and the relative humidity should be 20 to 80 percent.
- Avoid areas where rapid or extreme changes in temperature or humidity may occur.
- Keep the computer free of dust, moisture, and exposure to direct sunlight.
- Keep the computer away from heat sources, such as electric heaters.
- Do not use the computer near liquids or corrosive chemicals.
- Some components in the computer, including data storage media, can be damaged by magnets. Do not place the computer near magnetic objects or bring magnetic objects close to the computer. Be careful of objects, such as stereo speakers, that produce strong magnetic fields during operation. Also, be careful with metal objects, such as bracelets, which can be inadvertently magnetized.
- Do not operate the computer in close proximity to a mobile phone.
- Leave ample ventilation room for the fan. Ensure that there are no obstructions around any of the system inlets or exhaust vents.

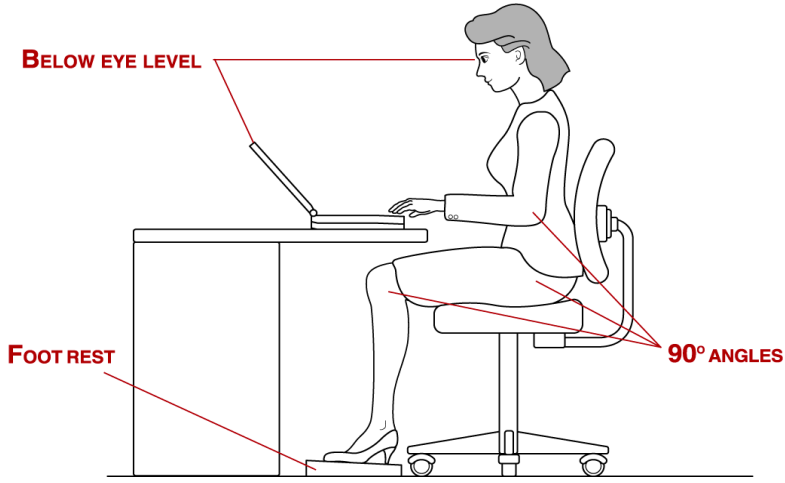
Placement of computer

Position the computer and peripheral devices to provide comfort and safety.

- Set the computer on a flat surface at a comfortable height and distance. The display should be no higher than eye level to avoid eye strain.
- Place the computer so that it is directly in front of you when you work and make sure you have adequate space to easily operate other devices.
- Allow adequate space behind the computer to let you freely adjust the display. The display should be angled to reduce glare and maximize visibility.
- If you use a paper holder, set it at about the same height and distance as the computer.

Seating and posture

The height of your chair in relation to the computer and keyboard as well as the support it gives your body are primary factors in reducing work strain.



- Place your chair so that the keyboard is at or slightly below the level of your elbow. You should be able to type comfortably with your shoulders relaxed.
- Your knees should be slightly higher than your hips. If necessary, use a foot rest to raise the level of your knees to ease pressure on the back of your thighs.
- Adjust the back of your chair so it supports the lower curve of your spine.
- Sit straight so that your knees, hips and elbows form approximately 90 degree angles when you work. Do not slump forward or lean back too far.

Lighting

Proper lighting can improve legibility of the display and reduce eye strain.

- Position the computer so that sunlight or bright indoor lighting does not reflect off the screen. Use tinted windows, shades or other screens to eliminate sun glare.
- Avoid placing the computer in front of bright light that could shine directly in your eyes.
- If possible, use soft, indirect lighting in your computer work area. Use a lamp to illuminate your documents or desk, but be sure to position the lamp so that it does not reflect off the display or shine in your eyes.

Work habits

A key to avoiding discomfort or injury from repetitive strain is to vary your activities.

If possible, schedule a variety of tasks into your work day. If you must spend long periods at the computer, finding ways to break up the routine can reduce stress and improve your efficiency.

- Sit in a relaxed posture. Good positioning of your chair and equipment as described earlier can reduce tension in your shoulders or neck and ease back strain.
- Vary your posture frequently.
- Occasionally stand up and stretch or exercise briefly.
- Exercise and stretch your wrists and hands a number of times during the day.
- Frequently, look away from the computer and focus your eyes on a distant object for several seconds, for example 30 seconds every 15 minutes.
- Take frequent short breaks instead of one or two long breaks, for example, two or three minutes every half hour.
- Have your eyes examined regularly and visit a doctor promptly, if you suspect you might be suffering from a repetitive strain injury.
- Please check every couple of months to ensure the fan inlets or exhaust vents (see sections 2-5 and 2-7) are unobstructed. Clean them if necessary.

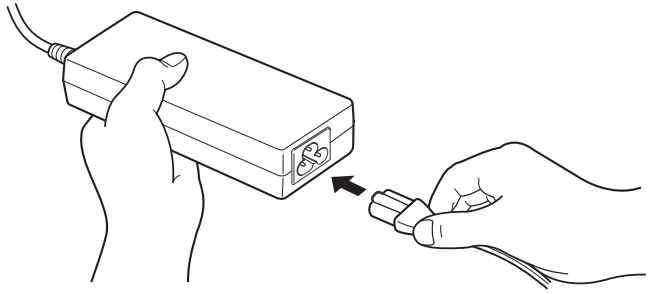
A number of books are available on ergonomics and repetitive strain injury or repetitive stress syndrome. For more information on these topics or for pointers on exercises for such stress points as hands and wrists, please check with your library or book vendor. Also refer to the computer's *Safety Instruction Manual*.

Connecting the AC adapter

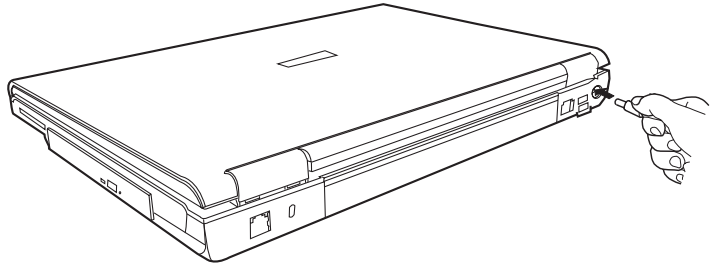
Attach the AC adapter when you need to charge the battery or you want to operate from AC power. It is also the fastest way to get started, because the battery pack will need to be charged before you can operate from battery power. The AC adapter can be connected to any power source supplying from 100 to 240 volts and 50 or 60 hertz.

Use of the wrong adapter could damage your computer. TOSHIBA assumes no liability for any damage in such case. The output rating for the computer is 19 volts DC.

1. Connect the power cord to the AC adapter.



2. Connect the DC output plug on the AC adapter to the **DC IN** input port on the back of the computer.



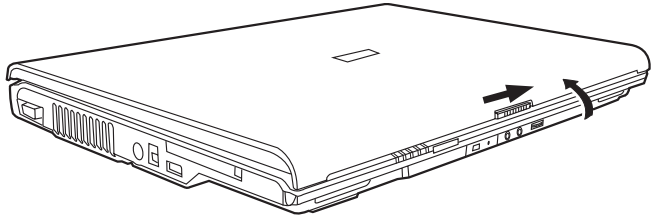
3. Plug the power cord into a live wall outlet. The **Battery** and **DC IN** indicators on the front of the computer should glow.

To disconnect AC adaptor, you can follow the reversed procedure of Connecting AC adaptor. Please hold the DC output plug portion by your fingers and then plug it out when you disconnect the DC output plug.

Opening the display

The display panel can be rotated in a wide range of angles for optimal viewing.

1. Push the display latch on the front of the computer.



2. Lift the panel up and adjust it to the best viewing angle for you.

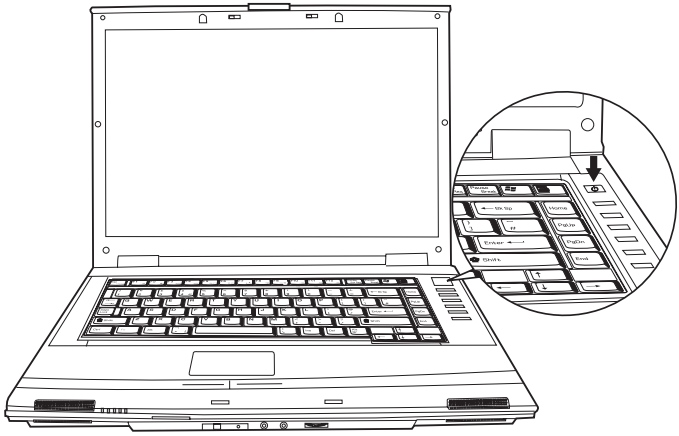
Use reasonable care when opening and closing the display panel. Opening it vigorously or slamming it shut could damage the computer.

Turning on the power

This section describes how to turn on the power.

After you turn on the power for the first time, do not turn it off until you have set up the operating system.

1. If a USB floppy disk drive is connected, make sure the drive is empty - if a disk is in the drive, press the eject button to remove it.
2. Open the display panel.
3. Press the computer's power button and then release it.



Starting up for the first time

When you first turn on the power, the computer's initial screen is the Windows® XP Startup Screen Logo. Follow the on-screen directions for each screen. During setup, you can click the **Back** button to return to the previous screen.

Be sure to read the **Windows® Operating System End User License Agreement** carefully.

Turning off the power

The power can be turned off in one of three modes, either Shutdown Mode (also known as Boot Mode), Hibernation Mode or Standby Mode.

Shut Down mode (Boot mode)

When you turn off the power in Shut Down mode, no data is saved and the computer will boot to the operating system's main screen.

1. If you have entered data, save it to the hard disk, to writable optical media or to a disk.
2. Make sure all disk activity has stopped, then remove the optical disc or floppy disk.

*Make sure the **built-in hard disk drive** and **optical disc drive** indicators are off before you switch the computer off. If you turn off the power while a disk is being accessed, you can lose data or damage the disk.*

3. Click **Start** and click **Shut Down**. From the **Shut Down** window click **Turn Off**.
4. Turn off the power to any peripheral devices.

Do not turn the computer or devices back on immediately. Wait a moment to let all capacitors fully discharge.

Restoring the pre-installed software from the Product Recovery disc

If preinstalled files are damaged, use the Product Recovery disc to restore them. To restore the operating system and all preinstalled software, follow the steps below.

When you reinstall the Windows® operating system, the hard disk will be reformatted and all data will be lost.

1. Load the Product Recovery disc in the drive and turn off the computer's power.
2. Switch on the computer and, when the **In Touch with Tomorrow TOSHIBA** prompt appears, press the **F12** key to display the Boot Menu.

3. Use the up or down cursor key to select the CD-ROM/DVD drive in the display menu.
4. Follow the on-screen instructions.

Please use the Express Media Player Recovery CD to reinstall the Express Media Player applications before you reinstall the Windows® operating system. (the availability of this function depends on the model you purchased).

Recovering Express Media Player Software

If the Express Media Software and its partition have been remove from your system, and you complete procedure, you must use your system's Recovery media to re-install the Windows operating system. It is important to save all files and documents to another media source prior to recovering your Express Media Player Software. Failure to do say may result in data loss.

If you are recovering the Express Media Player Software but have not removed the partition, your operation system, files and saved documents will remain on your computer.

The following procedure is for systems that have the Recovery Disc Creator icon on the desktop.

If the Express Media Player software is not provided on a separate software back-up CD, or is not included on your computer's recovery media, Toshiba recommends that you create a back up copy of the software and store it in a convenient location.

Please boot Express Media Player once before making recovery CD. If its recovery image is outdated, the following message is displayed.

The Express Media player had detected that its recovery image is outdated. Express Media player is creating a recovery image now.

Do not shutdown the system until this message is closed by the program. Toshiba recommends that you create a recovery CD for Express Media player for future use, by using the Recovery Disc Creator on your Windows desktop.

To make a back up of the Express Media Player Software:

1. Double-click the **Recovery Disc Creator** icon on your computer's desktop. The application displays the Recovery Disc Creator screen.
2. Insert a blank, writable disc, into your computer's CD/DVD drive.
3. Select the type of disc you wish to create by adding a check mark next to the appropriate item on the **Recovery Disc Creator** screen.
4. Click **Create**. Your computer ejects the disc when the files have been completely written to the media.

5. Carefully label the back up disc and store it in a safe place in case you need to restore Express Media Player Software to your computer at another time.

Using the Express Media Players Software BackUp CD

To use the CD you have created, follow this procedure:

1. Power off the system.
2. Power the system back on, and as soon as the Toshiba splash screen displays, press the F12 key until the boot menu appears.
3. Insert the Express Media Software CD into the CD/DVD drive.
4. From the screen menu, use the up/down arrow keys to select option3 (CD/DVD) and then press Enter.
5. Select the language of choice on the next screen by using the up/down arrow keys then press Enter.
6. Select the default keyboard and press Enter.
7. The following options are available:
   - Overwrite installation
   - Uninstall Express Media Player functions
   - Delete all partitions
   - Quit installation

Restoring the preinstalled software from the Product Recovery Media

If preinstalled files are damaged, use the Product Recovery Media to restore them. To restore the operating system and all preinstalled software, follow the steps below.

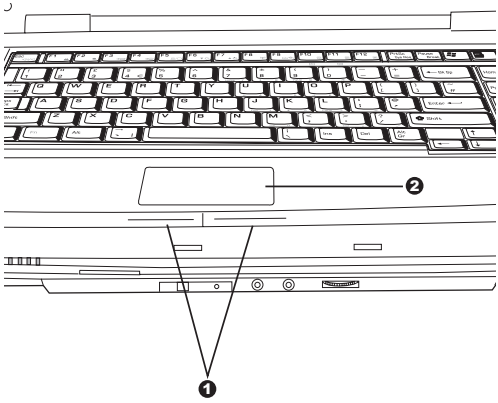
When you reinstall the Windows operating system, the hard disk will be reformatted and all data will be lost.

1. Load the Product Recovery Media in the drive and turn off the computer's power.
2. Hold down the **F12** key and turn on the power. When **In Touch with Tomorrow TOSHIBA** appears, release the **F12** key.
3. Use the up or down cursor key to select CD/DVD in the display menu. For details, refer to the *Boot Priority* section in Chapter 7, *HW Setup*.
4. Follow the on-screen instructions.

When you reinstall the Express Media Player, use Express Media Player Recovery CD to restore them before reinstall the Windows operating system.

Using the TouchPad

To use the TouchPad, simply move your finger tip across it in the direction you want the on-screen pointer to go.



1. TouchPad control buttons 2. TouchPad

The two buttons below the TouchPad are used like the buttons on a standard mouse.

Press the left button to select a menu item or to manipulate text or graphics designated by the pointer. Press the right button to display a menu or other function depending on the software you are using.

Do not press on the TouchPad too hard or press a sharp object such as a ball point pen against it. The TouchPad could be damaged.

The TouchPad has similar functions to a two-button mouse with a scroll wheel. For some functions, you can tap it instead of pressing a button.

You can customize pointing device actions in Mouse Properties. Open the Control Panel, select the Mouse icon and press Enter to open the Mouse Properties window.

Click: *Click the left control button or tap the TouchPad once.*

Double-click:*Click the left control button twice or tap the TouchPad twice.*

Scroll Vertical: *Move your finger up or down the right edge of the TouchPad.*

Horizontal: Move your finger left or right along the bottom edge of the TouchPad.

Using optical disc drives

The illustrations in this section might differ slightly from your drive, but operation is the same for all optical disc drives. The full-size drive provides high-performance execution of disc-based programs. You can run either 12 cm (4.72") or 8 cm (3.15") discs without an adapter. An ATAPI interface controller is used for disc drive operation. When the computer is accessing a disc, an indicator on the drive illuminates.

Use the WinDVD application to view DVD-Video discs.

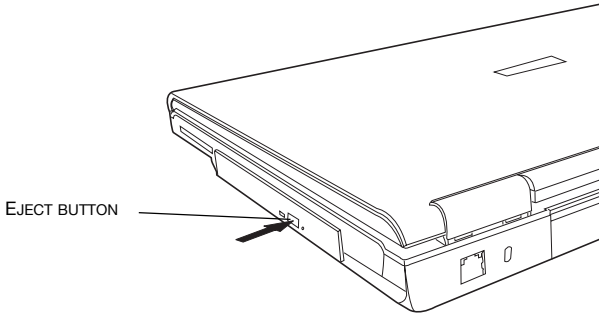
If you have a CD-RW/DVD-ROM drive, refer also to the Writing CDs on CD-RW/DVD-ROM drive section for precautions on writing to CDs.

If you have a DVD Super Multi drive supporting ±R Double Layer, refer also to the Writing CD/DVDs on DVD Super Multi drive supporting ±R Double Layer section for precautions on writing to CDs.

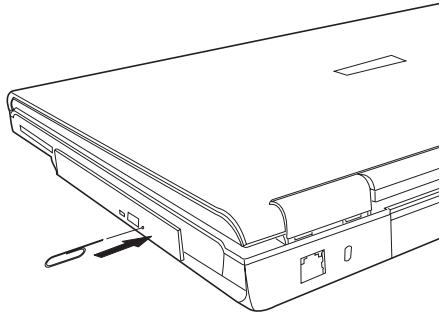
Loading optical disc media

To load a disc, follow the steps below.

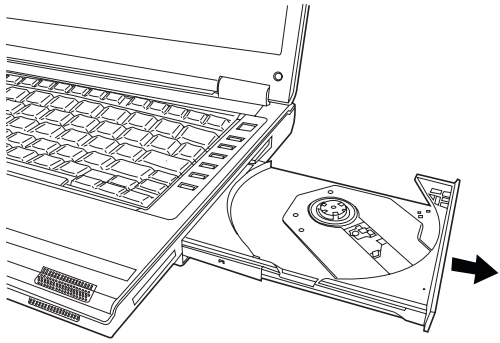
1. Turn on the power.
2. a. Press the eject button to open the drawer slightly.



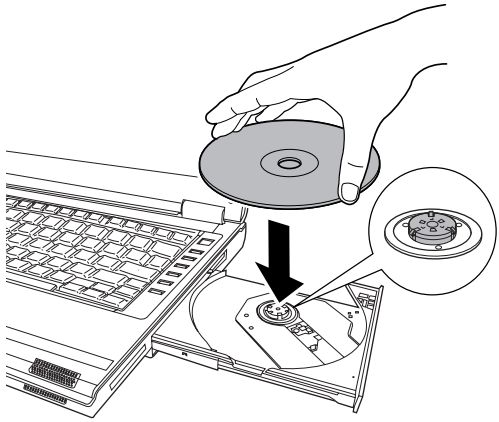
b. Pressing the eject button will not open the drawer when the computer's power is off. If the power is off, you can open the drawer by inserting a slender object (about 15 mm) such as a straightened paper clip into the eject hole just to the right of the eject button.



3. Grasp the drawer gently and pull until it is fully open.



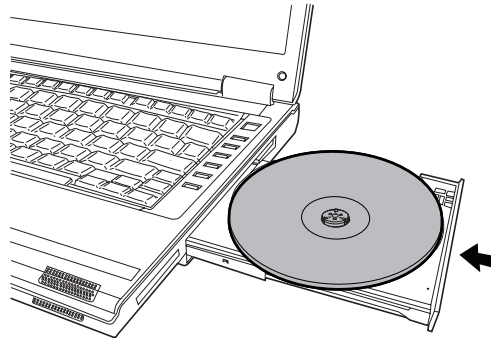
4. Lay the disc, label side up, in the drawer.



Be careful not to touch the lens or the area around it. Doing so could cause the drive to malfunction.

5. Press gently at the centre of the disc until you feel it click into place. The disc should lie below the top of the spindle, flush with its base.
6. Push the centre of the drawer to close it. Press gently until it locks in place.

If the disc is not seated properly when the drawer is closed, it might be damaged. Also, the drawer might not open fully when you press the eject button.



Removing optical disc media

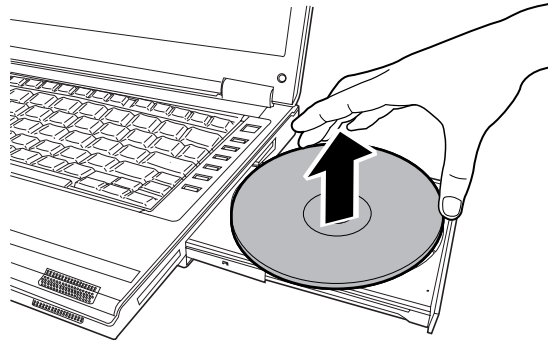
To remove the disc, follow the steps below.

*Do not press the eject button while the computer is accessing the disc drive. Wait for the **optical disc** indicator to go out before you open the drawer. Also, if the disc is spinning when you open it, wait for it to stop before you remove it.*

1. To pop the drawer partially open, press the eject button. Gently pull the drawer out until it is fully opened.

- *When the drawer pops open slightly, wait a moment to make sure the disc has stopped spinning before pulling the drawer fully open.*
- *Turn off the power before you use the eject hole. If the disc is spinning when you open the drawer, it could fly off the spindle and cause injury.*

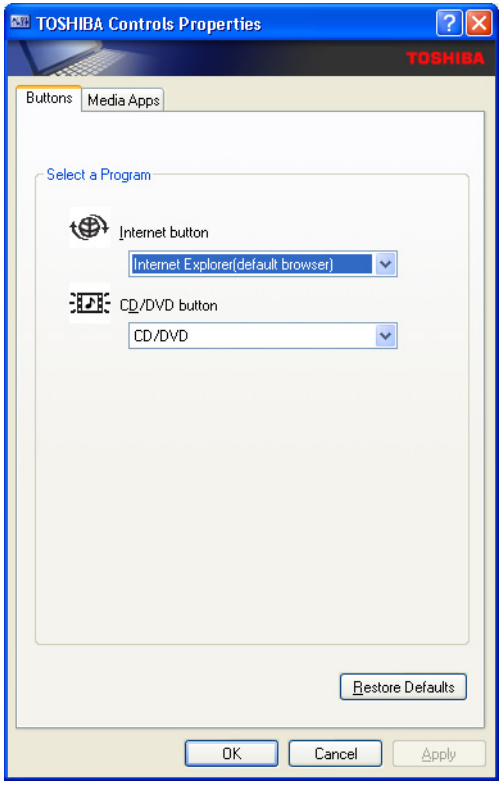
2. The disc extends slightly over the sides of the drawer so you can grasp it. Hold it gently and lift it out.



3. Push the centre of the drawer to close it. Press gently until it locks into place.

Buttons

The Internet button and the CD/DVD button can be assigned functions and applications in the TOSHIBA Controls Properties.



CD/DVD play control buttons

Icon	AV Button	Windows mode		Express Media Player mode	
		DVD (WinDVD5)	CD (WMP10*)	DVD	CD
	CD/DVD	Detect and activate media	Detect and activate media	Detect and activate media	Detect and activate media
▶/II	Play/Pause	Play/Pause	Play/Pause	Play/Pause	Play/Pause
■	Stop	Stop	Stop	Stop	Stop
⏮	Previous	Previous chapter	Previous tune	Previous chapter	Previous tune
⏭	Next	Next chapter	Next tune	Next chapter	Next tune

* Windows Media Player 10

If Random or Shuffle is selected in Windows® Media Player, selecting Next or Previous advances to a random selection.

Express Media Player (Provided with some models)

Express Media Player is a quick play feature that enables users to perform DVD and CD playback without loading Windows.

Please press "CD/DVD button" or "Power button + E Key", when the system is off or hibernation.

Before you use Express Media Player, please refer to Recovering Express Media Player Software in Chapter 3, Getting Started.

Press F1 to show pop up guide for Express Media Player and this guide available while Express Media Player is active.

Notes for Express Media Player

Express Media Player (CD) and Express Media Player (DVD) Usage

- Dirty or scratched CD/DVDs might not be playable. In addition, the CD/DVD might not be removable if the dirt or scratches are serious.
- Press the personal computer's power switch for five seconds or more to force it to shut down, you can open the drawer by inserting slender object (about 15mm) into the eject hole.

Express Media Player (DVD) Usage

- Express Media Player (DVD) plays the disc according to the way the DVD-Video has been programmed by the producer, hence sometimes it might not work as expected.
- (⃠) might appear on screen during operation. When (⃠) is displayed, it means that Express Media Player (DVD) or DVD-Video prohibits that particular operation from being carried out.
- Please also read the instructions that come with the DVD that you want to play.
- Depending on the DVD being played, there might be dropping of frames or skipping of audio.
- The DVD can only be played on the LCD display of the computer. External video output is not supported.
- For DVD titles with parental control, the level settings for the parental control function is not supported.
- Data stored in Video CD, DVD-Audio, -VR or +VR formats cannot be played. In addition, media that has not been finalized or MPEG, DivX, mini DVD and other file formats also cannot be played.
- Audio is only output in two channel stereo format.
- Titles with DTS or SDDS audio will have no audio output if such audio is selected.
- Audio output from SPDIF is not supported.
- This system is not karaoke mode compatible.
- When continuous actions are to be carried out, ensure that the current action is completed before carrying out the next one. Failure to do so might result in unexpected results.
- To remove a disc from the drive while the player is stopped, simply press the eject button on the drive. If the player is playing the media, press the "E" key, which will stop the player and eject the disc. If you manually remove the disc by using the eject hole on the drive during playback, the DVD-Video playback may not work. If this should happen, please reboot the Express Media Player before using.

Express Media Player Settings

There are a few settings that need to be made in order to use the Express Media Player functions for the first time. These are as follows:

Initial settings

When Express Media Player is first started or the recovery CD is used, the screen for carrying out the initial settings of the Express Media Player is displayed.

Please select the language for displaying the Express Media Player set up and guide.

Functions via the Front operation panel and the keyboard in the Express Media Player mode

This list shows how the functions available from the keyboard correspond to those available from the Front operation panel.

Front panel	Computer	CD	DVD
-	Power switch	Terminates CD	Terminates DVD
CD/DVD	-	Launch the CD	Launch the DVD
-	Fn + F7	Increases the brightness	Increases the brightness
-	Fn + F6	Decreases the brightness	Decreases the brightness
-	1	Select track 1	Select chapter 1
-	2	Select track 2	Select chapter 2
-	3	Select track 3	Select chapter 3
-	4	Select track 4	Select chapter 4
-	5	Select track 5	Select chapter 5
-	6	Select track 6	Select chapter 6
-	7	Select track 7	Select chapter 7
-	8	Select track 8	Select chapter 8
-	9	Select track 9	Select chapter 9
-	0	Normally functions as “0”	Normally functions as “0”
-	F8	-	Displays the top menu
-	F9	-	Displays the menu
-	↑	Move the cursor	Move the cursor
-	↓	Move the cursor	Move the cursor
-	←	Move the cursor	Move the cursor
-	→	Move the cursor	Move the cursor
-	Enter	Executes the selected option	Executes the selected option
-	F2	Displays or hides the Settings Menu	Displays or hides the Settings Menu
-	Ctrl + ↑	Increases the volume	Increases the volume

-	Ctrl + ↓	Decreases the volume	Decreases the volume
-	M	Mute the volume	Mute the volume
-	O	Rewinds quickly (1x←→2x)	Rewinds quickly (2x, 4x, 8x, 20x, 30x)
-	P	Skips forwards quickly (1x←→2x)	Skips forwards quickly (2x, 4x, 8x, 20x, 30x)
▶▶|	K	Next track	Next chapter
|◀◀	L	Previous track	Previous chapter
▶/II	Space	Play or pauses	Play or pauses
■	Ctrl + Space	Stop	Stop
-	Ctrl + R	Repeat track → Repeat all → None	-
-	Ctrl + S	Shuffle	-
-	D	Toggle display pplayback time	Enable/Disable elapse time display.
-	G	-	Changes the angle
-	S	-	Changes the subtitle
-	A	-	Changes the audio channel
-	T	Sleep Timer (30 Mins → 60 Mins → Turn off)	-
-	Y	-	Slow play (1/2x, 1/8x)
-	F1	Switch between basic function and full function	Display the keyguide
-	E	Eject	Eject

Cleaning the computer

To help ensure long, trouble-free operation, keep the computer free of dust and use care with liquids around the computer.

- Be careful not to spill liquids into the computer. If the computer does get wet, turn the power off immediately and let the computer dry completely before you turn it on again.
- Clean the computer using a slightly damp (with water) cloth. You can use glass cleaner on the display. Spray a small amount of cleaner on a soft, clean cloth and wipe the screen gently with the cloth.

Never spray cleaner directly onto the computer or let liquid run into any part of it. Never use harsh or caustic chemical products to clean the computer.

Moving the computer

The computer is designed for rugged durability. However, a few simple precautions taken when moving the computer will help ensure trouble-free operation.

- Make sure all disk activity has ended before moving the computer. Check the **Built-in Hard Disk Drive** and **optical disc drive** indicators on the computer.
- If a disk is in the disk drive, remove it.
- If a disc is in the optical disc drive, remove it. Also make sure the optical disc drive drawer is securely closed.
- Turn off the power to the computer.
- Disconnect all peripherals before moving the computer.
- Close the display. Do not pick up the computer by its display panel or back (where the interface ports are located).
- Close all port covers.
- Disconnect the AC adapter if it is connected.
- Use the carrying case when transporting the computer.

Typewriter keys

The typewriter keys, produce the upper- and lower-case letters, numbers, punctuation marks, and special symbols that appear on the screen.

There are some differences, however, between using a typewriter and using a computer keyboard:

- Letters and numbers produced in computer text vary in width. Spaces, which are created by a space character may also vary depending on line justification and other factors.
- The lowercase l (el) and the number 1 (one) are not interchangeable on computers as they are on a typewriter.
- The uppercase O (oh) and the 0 (zero) are not interchangeable.
- The **Caps Lock** function key locks only the alphabetic characters in uppercase while the shift lock on a typewriter places all keys in the shifted position.
- The **Shift** keys, the **Tab** key, and the **BkSp** (backspace) key perform the same function as their typewriter counterparts but also have special computer functions.

Power indicators

As shown in the above table, the **Battery**, **DC IN** and **Power** indicators alert you to the computer's operating capability and battery charge status

Battery indicator

Check the **Battery** indicator to determine the status of the battery. The following indicator lights indicate the battery status.

Flashing Amber	The battery charge is low. The AC adapter must be connected to recharge the battery
Amber	Indicates the AC adapter is connected and is charging the battery.
Blue/Green	Indicates the AC adapter is connected and the battery is fully charged.
No light	Under any other conditions, the indicator does not light.

DC IN indicator

Check the **DC IN** indicator to determine the power status with the AC adapter connected:

Blue/Green	Indicates the AC adapter is connected and is correctly supplying power to the computer.
No light	Indicates the AC adapter is not connected.

Power indicator

Check the **Power** indicator to determine the power status with the AC adapter connected:

Blue/Green	Indicates power is being supplied and the computer is turned on. Power indicator is located inside of the Power Button (depending the model you purchased) and in the front of the computer.
Blinking Amber	Indicates power is being supplied to the computer while the computer is in Standby mode.
No light	Under any other conditions, the indicator does not light.

Care and use of the battery pack

The battery pack is a vital component of portable computing. Taking proper care of it will help ensure longer operating time on battery power as well as a longer life for your battery pack. Follow the instructions in this section carefully to ensure safe operation and maximum performance.

Safety precautions

Mishandling of batteries can cause death, serious injury or property damage.

Carefully observe the following advice:

Danger: Indicates an imminently hazardous situation, which could result in death or serious injury, if you do not follow instructions.

Warning: Indicates a potentially hazardous situation, which could result in death or serious injury, if you do not follow instructions.

Caution: Indicates a potentially hazardous situation, which if not avoided, may result in moderate or minor injury or property damage.

Note: Provides important information.

Danger

1. Never try to dispose of the battery pack by burning or expose it to a heating device such as a microwave oven. The battery pack could explode and cause bodily injury.
2. Never try to disassemble, repair or otherwise tamper with a battery pack. The battery pack will overheat and ignite. Leakage of caustic alkaline solution or other electrolytic substances will cause fire or injury, possibly resulting in death or serious injury.

3. Never short-circuit the battery pack by contacting the terminals with a metal object. A short-circuit can cause fire or otherwise damage the battery pack and possibly cause injury. To avoid accidental short-circuit, always wrap the battery pack in plastic and cover the terminals with electrical tape when storing or disposing of the battery pack.
4. Never puncture the battery pack with a nail or other sharp object. Never strike it with a hammer or other object. Never step on it.
5. Never try to charge the battery pack in any manner other than that described in the user's manual. Never connect the battery pack to a plug socket or to an automobile's cigarette lighter socket. It may rupture or ignite.
6. Use only the battery pack supplied with the computer or other device or an battery pack approved by the computer or device's manufacturer. Battery packs have different voltages and terminal polarities. Use of an improper battery could cause smoke, fire or rupture of the battery pack.
7. Never subject a battery pack to heat, such as storage near a heat source. Exposure to heat can cause the battery pack to ignite, explode or leak caustic liquid and cause death or serious injury. It could also fail or malfunction causing data loss.
8. Never expose the battery pack to abnormal shock, vibration or pressure. The battery pack's internal protective device will fail, causing it to overheat, explode, ignite or leak caustic liquids possibly resulting in death or serious injury.
9. Never let a battery pack become wet. A wet battery pack will overheat, ignite or rupture possibly resulting in death or serious injury.

Warning

1. Never allow caustic electrolyte fluid leaked from a battery pack to contact your eyes, skin or clothing. If caustic electrolyte fluid should contact your eyes, immediately wash your eyes with large amounts of running water and seek medical attention, to help prevent eye damage. It electrolyte fluid should contact your skin, immediately wash it under running water to prevent rash. If it contacts your clothes, promptly remove them to prevent the fluid from contacting your skin or eyes.
2. Immediately turn off the power, disconnect the AC adapter and remove the battery if any of the following events are observed in the battery pack: offensive or unusual odor, excessive heat, discoloration or deformation. Never use the computer again until it has been checked by a TOSHIBA service provider. It might generate smoke or fire, or the battery pack might rupture.
3. Make sure the battery is securely installed in the computer before attempting to charge the battery pack. Improper installation could generate smoke or fire, or cause the battery pack to rupture.
4. Keep the battery pack out or reach of infants and children. It can cause injury.

Caution

1. Never continue to use a battery pack after its recharging capacity has become impaired, or after the display of a warning message indicating that the battery pack's power is exhausted. Continued use of an exhausted or impaired battery pack could cause the loss of data.
2. Never dispose of battery packs with normal trash. Bring them to your TOSHIBA dealer or to another recycling centre to save resources and prevent environmental damage. Cover the terminals with electrical tape to prevent short-circuits, which could cause the battery pack to ignite or rupture.
3. Use only battery packs recommended by TOSHIBA as replacements.
4. Always make sure the battery pack is installed correctly and securely. Otherwise, a battery pack could fall out and possibly cause injury.
5. Charge the battery pack only in an ambient temperature between 5 and 30 degrees Celsius. Otherwise, the electrolyte solution might leak, battery pack performance might deteriorate and the battery life might be shortened.
6. Be sure to monitor the remaining battery power. If the battery pack or real time clock battery discharge completely, Standby Mode will not function, and data in memory will be lost, and the computer might register an incorrect time and date. In this case, connect the AC adapter to recharge the batteries.
7. Never install or remove the battery pack without first turning off the power and disconnecting the AC adapter. Never remove the battery pack while the computer is in Standby Mode as data will be lost.

Note

1. Never remove the battery pack while the Wake-up on LAN function is enabled. Data will be lost. Before you remove a battery pack, disable the Wake-up on LAN function.
2. To ensure the battery pack maintains maximum capacity, operate the computer on battery power once a week until the battery pack is fully discharged. Refer to the section *Extending battery life* for procedures. If the computer is continuously operated on AC power for an extended period, more than a week, the battery might fail to retain a charge. It might not function efficiently over the expected life of the battery pack and the Battery indicator might not indicate a low-battery condition.
3. After the battery pack is charged, avoid leaving the AC adapter connected and the computer turned off for more than a few hours at a time. Continuing to charge a fully charged battery pack can damage the battery.

Charging the batteries

When the power in the battery pack becomes low, the **Battery** indicator flashes amber indicating that only a few minutes of battery power remain. If you continue to use the computer while the **Battery** indicator flashes, the computer enables Hibernation mode (so you don't lose data) and automatically turns off.

You must recharge a battery pack when it becomes discharged.

Procedures

To recharge a battery pack while it is installed in the computer, connect the AC adapter to the **DC IN** socket and plug the other end into a working outlet.

The **Battery** indicator glows amber when the battery is being charged.

Use only the computer connected to an AC power source to charge the battery pack. Do not attempt to charge the battery pack with any other charger.

Time

The following table shows the time required to fully charge a discharged battery.

Charging time (hours)

Battery type	Power on	Power off
Battery pack	about 12 or longer	about 4 or longer
RTC battery	about 24	about 24 with AC or Battery pack

The charging time when the computer is on is affected by ambient temperature, the temperature of the computer and how you use the computer.

If you make heavy use of external devices the battery might scarcely charge at all during operation. Refer also to the section Maximizing battery operating time.

Battery charging notice

The battery may not charge right away under the following conditions:

- The battery is extremely hot or cold. To make sure the battery charges to its full capacity, charge the battery at room temperature of 10° to 30°C (50° to 86°F).
- The battery is nearly completely discharged. Leave the AC adapter connected for a few minutes and the battery should begin charging.

Once a battery pack is fully charged, it is recommended that you operate the computer only on battery power until the battery pack completely discharges. Doing so extends battery life and helps ensure accurate monitoring of battery capacity.

The **Battery** indicator may show a rapid decrease in battery operating time when you try to charge a battery under the following conditions:

- The battery has not been used for a long time.
- The battery has completely discharged and been left in the computer for a long time.
- A cool battery is installed in a warm computer.

In such case, follow the steps below.

1. Fully discharge the battery by leaving it in the computer with the power on until the power automatically shuts off.
2. Plug in the AC adapter.
3. Charge the battery until the Battery indicator glows green or blue (depending the model you purchased).

Repeat these steps two or three times until the battery recovers normal capacity.

Leaving the AC adapter connected will shorten battery life. At least once a week, run the computer on battery power until the battery is fully discharged, then recharge the battery.

Monitoring battery capacity

Remaining battery power can be monitored by the TOSHIBA Power Saver.

- *Wait for a moment after turning on the computer before trying to monitor the remaining operating time. The computer needs this time to check the battery's remaining capacity.*
- *With repeated discharges and recharges, the battery's capacity will gradually decrease. Therefore, an often used, older battery will not operate for as long as a new battery even when both are fully charged.*

Extending battery life

To maximize the life of your battery pack:

- If you have extra battery packs, rotate their use.
- If you will not be using the system for an extended period, remove the battery pack.
- Store spare battery packs in a cool dry place out of direct sunlight.

Replacing the battery pack

When the battery pack reaches the end of its operating life you will need to install a new one. If the **Battery** indicator flashes amber shortly after the battery has been fully recharged, the battery pack needs to be replaced.

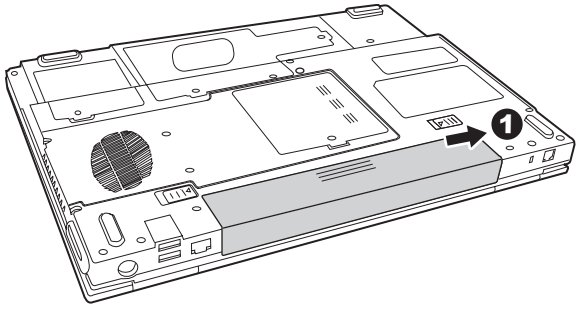
You might also replace a discharged battery pack with a charged spare when you are operating your computer away from an AC power source. This section explains how to remove and install the battery pack.

Removing the battery pack

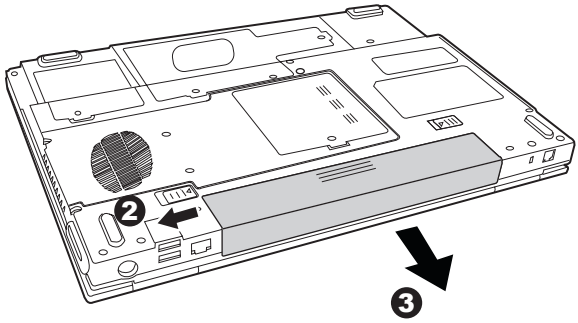
To replace a discharged battery pack, follow the steps below.

- *When handling battery packs, be careful not to short circuit the terminals. Also do not drop, hit or otherwise apply impact; do not scratch or break the casing and do not twist or bend the battery pack.*
- *Do not remove the battery pack while the computer is in Standby Mode as data in memory will be lost.*

1. Save your work.
2. Turn the computer's power off. Make sure the Power indicator is off.
3. Remove all cables connected to the computer.
4. Turn the computer upside down.
5. Unlock the Battery Pack Lock.



6. Slide the battery pack latch to the left, then pull the battery out of the battery bay.

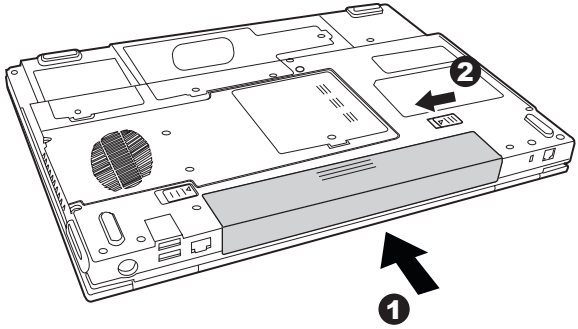


Installing the battery pack

To install a battery pack, follow the steps below.

The battery pack is a lithium ion battery, which can explode if not properly replaced, used, handled or disposed of. Dispose of the battery as required by local ordinances or regulations. Use only batteries recommended by TOSHIBA as replacements.

1. Turn the computer's power off.
2. Disconnect all cables connected to the computer.
3. Hold the battery pack so that the label faces down and the connectors on the battery face the connectors on the computer.
4. Gently slide the battery into the battery bay until the latch clicks into place.



TOSHIBA Password Utility

The TOSHIBA Supervisor Password Utility provides two levels of password security: User and Supervisor.

Passwords set in TOSHIBA Supervisor Password Utility are different from the Windows® login password.

User Password

To start the utility, point to or click the following items:

`Launch TOSHIBA Assist → SECURE → User Password`

- **Registered**

  Click to register a password of up to 8 characters. After a password is set, you will be prompted to enter it when you start the computer.

- **Not Registered**

  Click to delete a registered password. Before you can delete a password, you must first enter the current password correctly.

- **Owner String** (text box)

  You can use this box to associate text with the password. After you enter text, click **Apply** or **OK**, then, each time the computer is switched on, this text will be displayed along with the prompt for the password.

Supervisor password

If you set a supervisor password, some functions will be restricted when a user logs on with the user password. To set a supervisor password:

`TOSHIBA Assist → SECURE → Supervisor password`

This utility lets you do the following:

- Register or delete the supervisor password.
- Specify restrictions for general users.

Starting the computer by password

If you registered a password, start the computer by entering the password manually.

The password is necessary only if the computer was shut down in boot mode, not in Hibernation or Standby mode.

To enter a password manually, follow these steps:

1. Turn on the power. The following message will appear in the LCD:

   `Enter Password [xxxxxxxx]`

2. Enter the Password.
3. Press **Enter**.

If you enter the password incorrectly three consecutive times, the computer shuts down. You must turn on the computer again and re-enter the password.

PC Card

The computer is equipped with a PC Card expansion slot that can accommodate one 5 mm Type II card. Any PC Card that meets industry standards (manufactured by TOSHIBA or other vendor) can be installed. The slots support 16-bit PC Cards, including PC Card 16's multifunction card and CardBus PC Cards. CardBus supports the new standard of 32-bit PC cards. The bus provides superior performance for the greater demands of multimedia data transmission.

A hard disk drive or optical media drive connected to a 16-bit PC Card might affect the performance of the computer's sound system and modem data transmission, including slower transmission speeds and dialling errors.

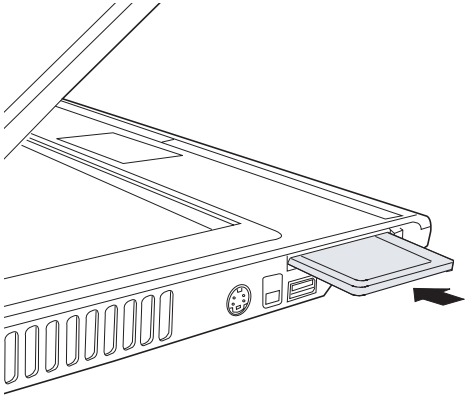
Installing a PC card

One PC Card connector is located on the left side of the computer. The computer's hot-install feature lets you install PC Cards while the computer's power is on.

Do not install a PC Card while the computer is in Standby Mode or Hibernation Mode as some cards might not work properly.

To install a PC Card, follow the steps below.

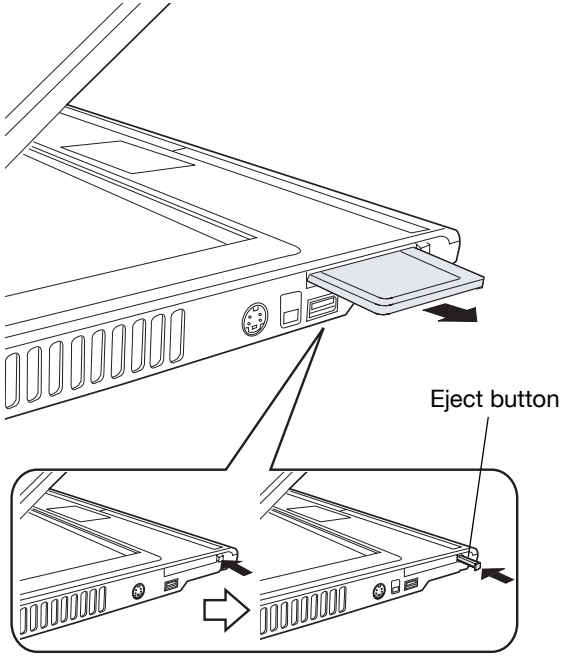
1. Insert the PC Card.
2. Press gently to ensure a firm connection.



After installing the card, refer to the card's documentation and check the configuration in Windows® to make sure it is appropriate for your card.

Removing a PC card

1. Click the **Safely Remove Hardware** icon on the Task Bar.
2. Click the PC Card you want to remove.
3. Press the eject button of the PC Card to extend it.
4. Press the extended eject button to pop the card out slightly.
5. Grasp the PC Card and remove it.



ExpressCard

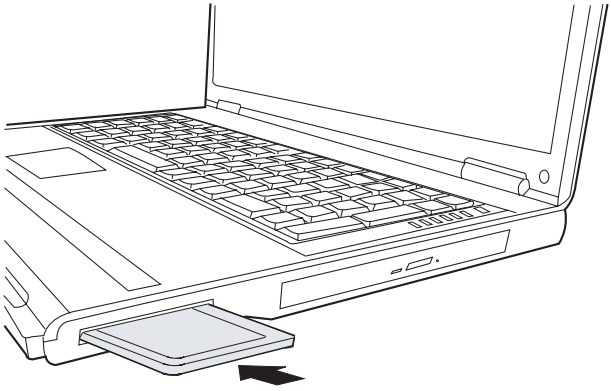
The computer (depending on the model) is equipped with an ExpressCard expansion slot that can accommodate two standard module formats; an ExpressCard/34 module and an ExpressCard/54 module. An ExpressCard module is a small, modular add-in card technology based on PCI Express and Universal Serial Bus (USB) interfaces.

Installing an ExpressCard

One ExpressCard connector is located on the right side of the computer. The computer's hot-install feature lets you install ExpressCard while the computer's power is on.

To install an ExpressCard, follow the steps below.

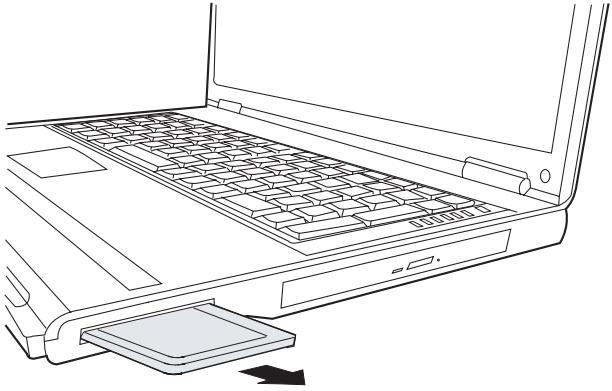
1. Insert the ExpressCard.
2. Press gently to ensure a firm connection.



After installing the card, refer to the card's documentation and check the configuration in Windows to make sure it is appropriate for your card.

Removing an ExpressCard

1. Click the **Safety Remove Hardware** icon on the Task Bar.
2. Click the ExpressCard you want to remove.
3. Press the ExpressCard once to extend it.
4. Grasp the extended ExpressCard, and remove it.



SD/MMC/MS/MS Pro/xD Memory cards

The computer is equipped with a multiple digital media card slot that can accommodate SD/MMC/MS/MS Pro/xD memory cards. These memory cards let you easily transfer data from devices, such as digital cameras and Personal Digital Assistants, which use flash-memory.

Card Type	Capacities
SD	8MB, 16MB, 32MB, 64MB, 128MB, 256MB, 512MB, 1GB, 2GB
MMC	8MB, 16MB, 32MB, 64MB, 128MB, 256MB, 512MB, 1GB
MS	8MB, 16MB, 32MB, 64MB, 128MB, 256MB
MS Pro	256MB, 512MB, 1GB, 2GB
xD	16MB, 32MB, 64MB, 128MB, 256MB, 512MB, 1GB, 2GB

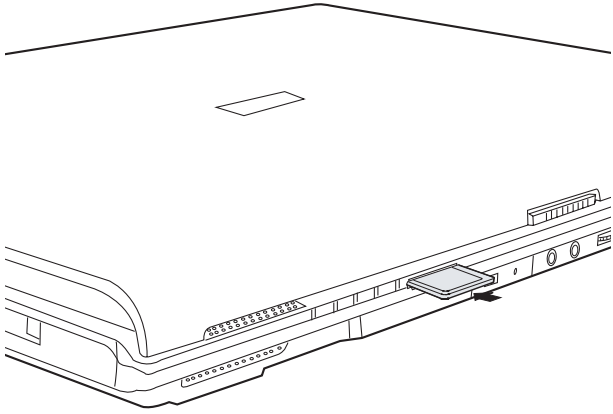
Keep foreign objects out of the memory card slot. A pin or similar object can damage the computer's circuitry.

Do not format a memory card with Windows® as it might result in that card not being able to be used with some peripheral devices.

Installing a memory card

To install a memory card:

1. Insert the memory card.
2. Press gently to ensure a firm connection.



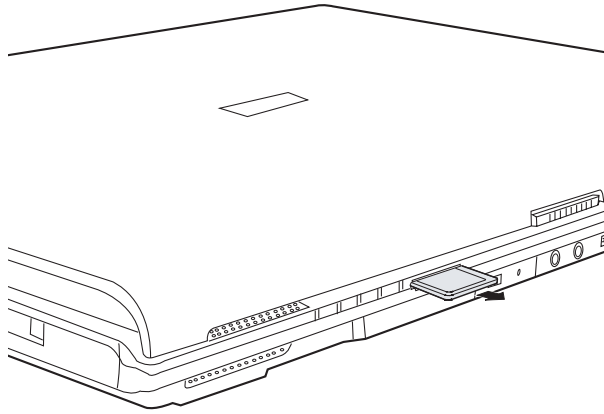
Be sure the memory card is oriented properly before you insert it.
If Windows® fails to read the card, remove it then re-insert it.

- *The multiple digital media card slot only accepts one type of card at a time. Do not attempt to install more than one card as you risk damaging either the cards themselves or the computer.*
- *Memory Stick Duo, Memory Stick Pro Duo and Mini-SD cards are not supported.*

Removing a memory card

To remove a memory card, follow the steps below:

1. Click the **Safely Remove Hardware** icon on the Taskbar.
2. Select a device, then click the **Stop** button. A confirmation dialog may appear, depending on how the device is registered with the system; if so, confirm that you want to remove the device.
3. Gently press the memory card inside the socket to eject it.
4. Grasp the card and remove it.



- *Make sure the memory card indicator is out before you remove the card or turn off the computer's power. If you remove the card or turn off the power while the computer is accessing the card you may lose data or damage the card.*
- *Do not remove the card while the computer is in Standby or Hibernation mode. The computer could become unstable or data in the memory card could be lost.*
- *Do not turn off or place the computer into either Standby Mode or Hibernation Mode while data is being transferred to or from the memory card. The system may become unstable or data in the memory card may be lost.*

Memory card care

Set the write-protect switch to the lock position, if you do not want to record data.

1. Do not write to a memory card if the battery power is low. Low power could affect writing accuracy.
2. Do not remove a memory card while read/write is in progress.
3. The memory card is designed so that it can be inserted only one way. Do not try to force the card into the slot.
4. Do not leave a memory card partially inserted in the slot. Press the memory card until you hear it click into place.
5. Do not twist or bend memory cards.
6. Do not expose memory cards to liquids or store in humid areas or lay media close to containers of liquid.
7. After using a memory card, return it to its case.
8. Do not touch the metal part or expose it to liquids or let it get dirty.

Memory expansion

You can install additional memory in the computer's memory module socket to increase the amount of RAM. This section describes how to install and remove a memory module.

- *Before you install or remove a memory module, turn off the computer with the Shut Down option in the Windows Start menu. If you install or remove a memory module while the computer is in Standby or Hibernation mode, data will be lost.*
- *Some memory modules can be physically installed but are not compatible with the computer. In this case the computer will issue a warning.*

  Satellite A110/Satellite Pro A110 series: *There will be a long beep, 3 short beeps, 3 more short beeps and then a long beep when you turn the power on. In this case, shut down the power and remove the incompatible memory module.*

  CAUTION: *If you want to upgrade system memory, you should only use certified modules. Ask your vendor or check the TOSHIBA web site for a list of approved memory products.*

Installing a memory module

If you use the computer for a long time, the memory modules will become hot. In this case, let the memory modules cool to room temperature before you replace them.

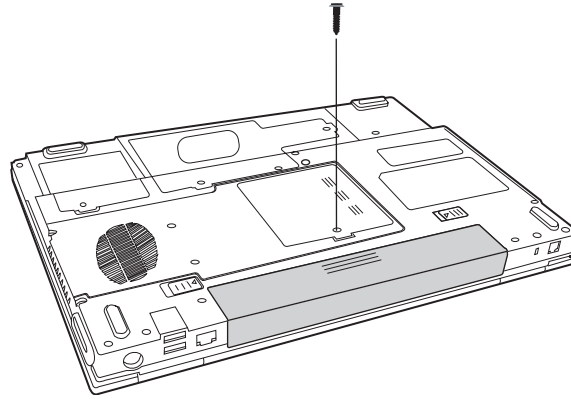
Follow these steps to install a memory module:

1. Set the computer to boot mode and turn off the power.

Do not try to install a memory module under the following conditions. You can damage the computer and the module.

   a. *The computer is turned on.*
   b. *The computer was shut down using the Stand by mode.*
   c. *Power to the optical disc drive has been turned on by the CD Power switch.*

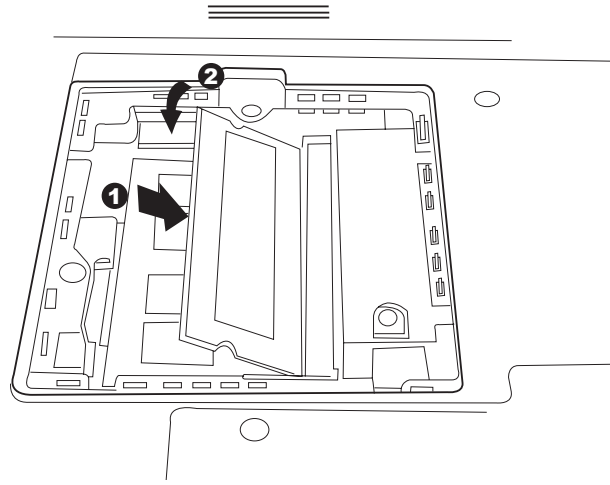
2. Remove all cables connected to the computer.
3. Turn the computer upside down and remove the battery, refer to Chapter 6, *Power and Power-Up Modes*.
4. Loosen the one screw securing the memory module socket cover.
5. Slide your fingernail or a thin object under the cover and lift it off.



6. Fit the module's connectors into the computer's connectors at about a 45 degree angle and press the module carefully to ensure a firm connection.

Do not touch the connectors on the memory module or on the computer. Debris on the connectors may cause memory access problems.

7. Push the module down so it lies flat. Latches on either side will click into place to secure the module.



8. Seat the cover and secure it with the screw.
9. Replace the battery pack as described in Chapter 6, *Power and Power-Up Modes*.
10. Turn the power on and make sure the added memory is recognized.

Removing a memory module

If you use the computer for a long time, the memory modules will become hot. In this case, let the memory modules cool to room temperature before you replace them.

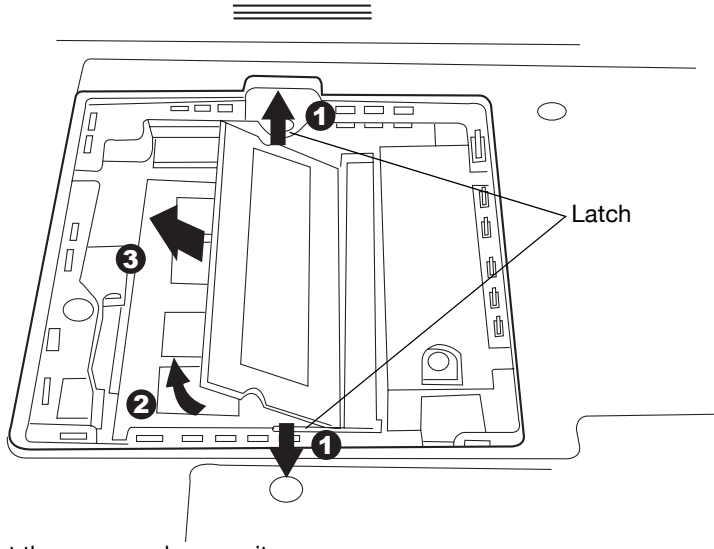
To remove the memory module, make sure the computer is in boot mode then:

1. Be sure the power is off and all cables are disconnected from the computer.

Do not try to remove a memory module with the computer turned on. You can damage the computer and the module.

2. Turn the computer upside down and remove the battery and loosen the screw securing the memory module socket cover.
3. Slide your fingernail or a thin object under the cover and lift it off.
4. Push the latches to the outside to release the module. A spring will force one end of the module up.
5. Grasp the module and pull it out.

Do not touch the connectors on the memory module or on the computer. Debris on the connectors may cause memory access problems.



6. Seat the cover and secure its screw.
7. Replace the battery.

Problem solving process

Resolving problems will be much easier if you observe the following guidelines:

- Stop immediately when you recognize a problem exists. Further action may result in data loss or damage. You may destroy valuable problem-related information that can help solve the problem.
- Observe what is happening. Write down what the system is doing and what actions you performed immediately before the problem occurred. If you have a printer attached, print a copy of the screen using PrtSc.
- Isolate the problem. Using the tools available to you, such as the troubleshooting tips in this section, try to discover the specific actions that caused the problem.

The questions and procedures offered in this section are meant as a guide, they are not definitive problem solving techniques. Many problems can be solved simply, but a few may require help from your dealer. If you find you need to consult your dealer or others, be prepared to describe the problem in as much detail as possible.

TOSHIBA support

If you require any additional help using your computer or if you are having problems operating the computer, you may need to contact TOSHIBA for additional technical assistance.

Before you call

Some problems you experience may be related to software or the operating system, it is important to investigate other sources of assistance first. Before contacting TOSHIBA, try the following:

- Review troubleshooting sections in the documentation for software and peripheral devices.
- If a problem occurs when you are running software applications, consult the software documentation for troubleshooting suggestions. Call the software company's technical support for assistance.
- Consult the dealer you purchased your computer and/or software from. They are your best sources for current information and support.

Where to write

If you are still unable to solve the problem and suspect that it is hardware related, write to TOSHIBA at the nearest location listed below:

Outside of Europe	In Europe
Australia TOSHIBA (Australia) Pty, Ltd. Information Systems Division 84-92 Talavera Road, North Ryde, N.S.W. 2113 Sydney	**Germany & Austria** TOSHIBA Europe (I.E.) GmbH Geschäftsbereich, Deutschland-Österreich Hammfelddamm8, D-41460 Neuss, Germany
Canada TOSHIBA of Canada Ltd. 191 McNabb Street, Markham, Ontario L3R8H2	**France** TOSHIBA Systèms France S.A. 7, Rue Ampère B.P. 131, 92804 Puteaux Cedex
China TOSHIBA Personal Computer & Network (Shanghai) Co. Ltd. 43F Hongkong new world tower, No. 300 Huai Hai Zhong Road Shanghai, P.R. China 20002	**Netherlands** TOSHIBA Information Systems, Benelux B.V. Rivium Boulevard 41 2909 LK Capelle a/d Ijessel
Singapore TOSHIBA Singapore Pte. Ltd. 438B Alexandra Road #06-01 Alexandra Technopark Singapore 119968	**Spain** TOSHIBA Information Systems, ESPAÑA Parque Empresarial San Fernando Edificio Europa, la Planta, Escalera A 28830 Madrid
United States of America TOSHIBA America Information Systems, Inc. 9740 Irvine Boulevard Irvine, California 92 718 USA	**United Kingdom** TOSHIBA Information Systems (U.K.) Ltd. TOSHIBA Court Weybridge Business Park Addlestone Road KT15 2UL Weybridge, Surrey
	The Rest of Europe TOSHIBA Europe (I.E.) GmbH Hammfelddamm8, D-41460 Neuss, Germany

Disclaimers

CPU

Central Processing Unit (“CPU”) Performance Disclaimer.

CPU performance in your computer product may vary from specifications under the following conditions:

- use of certain external peripheral products
- use of battery power instead of AC power
- use of certain multimedia, computer generated graphics or video applications
- use of standard telephone lines or low speed network connections
- use of complex modelling software, such as high end computer aided design applications
- use of several applications or functionalities simultaneously
- use of computer in areas with low air pressure (high altitude >1,000 meters or >3,280 feet above sea level)
- use of computer at temperatures outside the range of 5 °C to 30 °C (41 °F to 86 °F) or >25 °C (77 °F) at high altitude (all temperature references are approximate and may vary depending on the specific computer model - please refer to your PC documentation or visit the Toshiba website at www.pcsupport.toshiba.com for details).

CPU performance may also vary from specifications due to design configuration.

Under some conditions, your computer product may automatically shutdown. This is a normal protective feature designed to reduce the risk of lost data or damage to the product when used outside recommended conditions. To avoid risk of lost data, always make back-up copies of data by periodically storing it on an external storage medium. For optimum performance, use your computer product only under recommended conditions. Read additional restrictions in your product documentation. Contact Toshiba technical service and support.

Battery Life

Battery life may vary considerably depending on product model, configuration, applications, power management settings and features utilized, as well as the natural performance variations produced by the design of individual components. Published battery life numbers are achieved on select models and configurations tested by Toshiba at the time of publication. Recharge time varies depending on usage. Battery may not charge while computer is consuming full power.

After going through many charge and discharge cycles, the battery will lose its ability to perform at maximum capacity and will need to be replaced. This is a normal phenomenon for all batteries. To purchase a new battery pack, see the accessories information that is shipped with your computer.

HDD Drive Capacity

1 Gigabyte (GB) means 10^9 = 1,000,000,000 bytes using powers of 10. The computer operating system, however, reports storage capacity using powers of 2 for the definition of 1 GB = 2^{30} = 1,073,741,824 bytes, and therefore shows less storage capacity. Available storage capacity will also be less if the product includes one or more pre-installed operating systems, such as Microsoft Operating System and/or pre-installed software applications, or media content. Actual formatted capacity may vary.

LCD

Over a period of time, and depending on the usage of the computer, the brightness of the LCD screen will deteriorate. This is an intrinsic characteristic of LCD technology.

Maximum brightness is only available when operating in AC power mode. The screen will dim when the computer is operated on battery power and you will not be able to increase the brightness of the screen.

Wireless LAN

The transmission speed over the wireless LAN and the distance over which wireless LAN can reach may vary depending on surrounding electromagnetic environment, obstacles, access point design and configuration, and client design and software/hardware configurations.

[54Mbps is the theoretical maximum speed under the IEEE802.11 (a/b/g) standard.] The actual transmission speed will be lower than the theoretical maximum speed.

Non-applicable Icons

Certain notebook chassis are designed to accommodate all possible configurations for an entire product series. Therefore, please be aware that your selected model may not have all the features and specifications corresponding to all of the icons or switches shown on the notebook chassis.

Copy Protection

Copy protection technology included in certain media may prevent or limit recording or viewing of the media.

SRS

SRS TruSurround XT is available in the Microsoft Windows® operating system only.

Images

All images are simulated for purposes of illustration.

Express Media Player

The Express Media Player is not a Windows® based application. Battery life will be less than when using similar applications in the Windows operating system.

LCD Brightness and Eye Strain

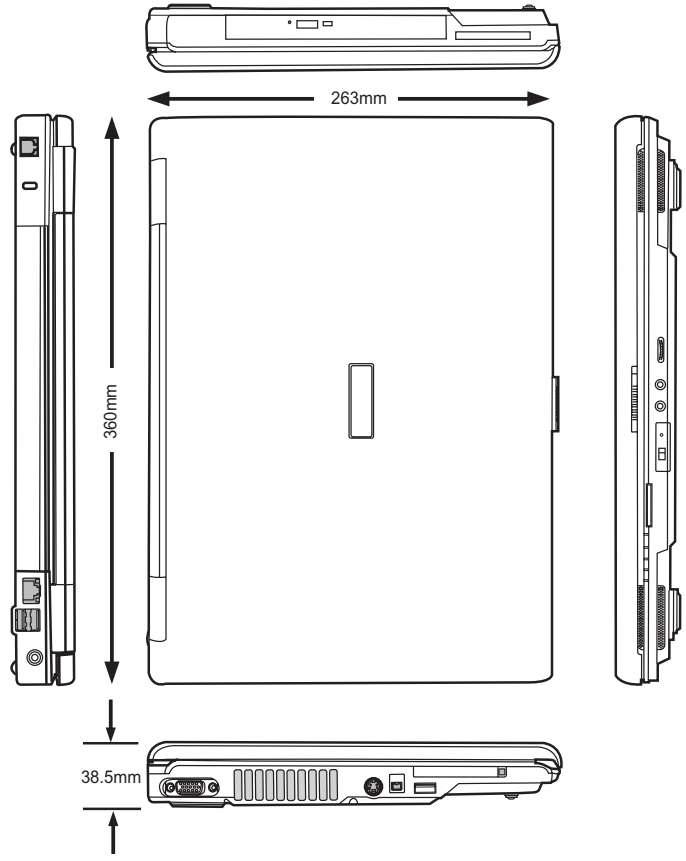
Your LCD display has a brightness approaching that of a TV device. We recommend that you adjust the brightness of your LCD to a comfortable level to prevent possible strain on your eyes.

Specifications

This appendix summarizes the computer's technical specifications.

Dimensions

360mm (W) x 263mm (D) x 38.5mm (H. Max.)



Weight

Starting at 2.72kg / 5.99lbs*

* Weight may vary depending on product configuration, vendor components, manufacturing variability and options selected.

Environmental Requirements

Conditions	Ambient temperature	Relative humidity
Operating	5°C to 35°C	20% to 80%
Non-operating	-20°C to 65°C	
Conditions	Altitude (from sea level)	
Operating	-30 to 10,000 feet	
Non-operating	-30 to 40,000 feet	

Built-in Modem

Network control unit (NCU)		
Type of NCU	AA	
Type of line	Telephone line (analog only)	
Type of dialling	Pulse Tone	
Control command	AT commands EIA-578 commands	
Monitor function	Computer's speaker	
Communication specifications		
Communication System	Data: Fax:	Full duplex Half duplex
Communication Protocol	Data: ITU-T-Rec (Former CCITT) Bell Fax: ITU-T-Rec (Former CCITT)	 V.21/V.22/V.22bis/ V.32/ V.32bis/V.34/ V.90/ V.92(only for USA and Canada) 103/212A V.17/V.29/V.27ter /V.21 ch2

Communication Speed	Data transmission and reception 300/1200/2400/4800/7200/9600/12000/14400/ 16800/19200/21600/24000/26400/28800/ 31200/ 33600 bps Data reception only with V.90/V.92 28000/29333/30666/32000/33333/34666/ 36000/37333/38666/40000/41333/42666/ 44000/45333/46666/48000/49333/50666/ 52000/53333/54666/ 56000 bps Fax: 2400/4800/7200/9600/12000/14400 bps
Error correcting	MNP class 4 and ITU-T V.42
Data compression	MNP class 5 and ITU-T V.42bis

AC Power Cord and Connectors

The power cord's AC input plug must be compatible with the various international AC power outlets and the cord must meet the standards for the country/region in which it is used. All cords must meet the following specifications:

Length:	Minimum 1.8 meters
Wire size:	Minimum 0.75 mm^2
Current rating:	Minimum 2.5 amperes
Voltage rating:	125 or 250 VAC (depending on country/region's power standards)

Certification agencies

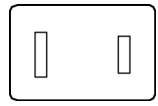
U.S. and Canada:	UL listed and CSA certified No. 18 AWG, Type SVT or SPT-2		
Australia:	AS		
Europe:			
Austria:	OVE	**Italy:**	IMQ
Belgium:	CEBEC	**The Netherlands:**	KEMA
Denmark:	DEMKO	**Norway:**	NEMKO
Finland:	FIMKO	**Sweden:**	SEMKO
France:	LCIE	**Switzerland:**	SEV
Germany:	VDE	**United Kingdom:**	BSI

In Europe, two conductors power cord must be VDE type, H05VVH2-F or H03VVH2-F and for three conductors power cord must be VDE type, H05VV-F.

For the United States and Canada, two pin plug configuration must be a 2-15P (250V) or 1-15P (125V) and three pin plug coniguration must be 6-15P (250V) or 5-15P (125V) as designated in the U. S. National Electrical code handbook and the Canadian Electrical Code Part II.

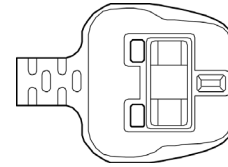
The following illustrations show the plug shapes for the U. S. A. and Canada, the United Kingdom, Australia and Europe.

USA



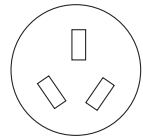
UL approved

United Kingdom



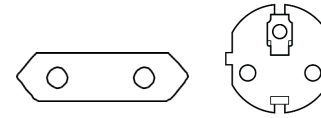
BS approved

Australia



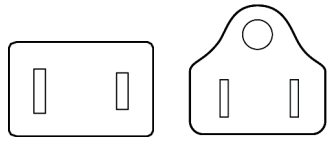
AS approved

Europe



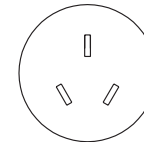
Approved by the appropriate agency

Canada



CSA approved

China



CCC approved